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# USSR Report

KOMMUNIST

NO. 11, JULY 1986

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USSR REPORT

KOMMUNIST

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[Translation of KOMMUNIST, the Russian-language theoretical and political journal of the CPSU Central Committee published in Moscow (18 issues per year).]

CONTENTS

Intensification: Reorganization in Progress, Search for New Approaches (Yu. Solovyev).....	1
STRATEGY OF ACCELERATION: THEORY AND PRACTICE	
Major Link of Renovation. KOMMUNIST Round-Table Discussion at the Novolipetsk Metallurgical Combine.....	13
NEW WAY OF THINKING AND WORKING	
VAZ: Components of Success (V. Kalinkin).....	45
In My Opinion... Letters to the Editors	
Solving a Painful Problem (A. Gorelik).....	56
Specialization in Machine Building (V. Zamalin).....	61
Critical Review of Economic Legislation (V. Prozorov).....	65
EVERYTHING WITHIN MAN -- EVERYTHING FOR MAN	
Man's Psychological Abilities and Problems of Education (V. Tsvetkova).....	69

**Man of the New World: Concerns, Ideals, Values**

**Work Means Creativity**  
(Ye. Golub)..... 80

**SOCIAL POLICY, DEMOCRACY, SELF-GOVERNMENT**

**Social Reconstruction of the Countryside**  
(P. Grishkyavichus)..... 86

**IN THE SOCIALIST COUNTRIES: EXPERIENCE, ACHIEVEMENTS, PROBLEMS**

**Comprehensive Program of Our Development**  
(Josef Lenart)..... 99

**Congress of Innovative Quest**  
(Chudomir Aleksandrov)..... 109

**CONTEMPORARY WORLD: TRENDS AND CONTRADICTIONS**

**Cambodian Revolution: Development Stages**  
(Heng Samrin)..... 120

**Lessons of the Great Patriotic War and the USSR's Struggle for Peace**  
(B. Ponomarev)..... 130

**The Time Factor in the Nuclear Age**  
(Yu. Zhilin)..... 142

**BOOK REVIEWS AND BIBLIOGRAPHY**

**Production Intensification: Urgent Problems and Scientific Reserves**  
(L. Abalkin, A. Nikonov and T. Khachaturov)..... 153

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INTENSIFICATION: REORGANIZATION IN PROGRESS, SEARCH FOR NEW APPROACHES

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[Article by Yu. Solovyev, candidate member of the CPSU Central Committee Politburo, first secretary of the Leningrad Party Obkom]

[Text] The 27th CPSU Congress, which raised to a new height the fundamental stipulations of the April 1985 Central Committee Plenum, clearly marked the depth and scale of the forthcoming reorganization in society and provided clear answers to the crucial problems of our time.

"The party's task of accelerating the country's socioeconomic development," the new draft of the CPSU program notes, "requires profound changes, above all in the decisive area of human activities--economics. A sharp turn must be made toward production intensification; each enterprise and sector must be redirected toward the full and primary utilization of the quality factors of economic growth." In accordance with these daring and innovative plans, the long-term implementation of the strategic course must be organically combined with intensive current work which largely determines the actual results of the deep reorganization of social life.

Today the Leningrad Oblast Party Organization considers as its most important task to direct with even greater persistence the efforts of the working people in the city and oblast toward achieving radical changes in all realms of economic activities. The resolutions of the June 1986 CPSU Central Committee Plenum and the stipulations in the report submitted by M.S. Gorbachev urged the party members and all working people to assess accomplishments and formulate specific steps for the implementation of the strategy of acceleration with a great feeling of responsibility and a self-critical attitude.

The implementation and further intensification of the work on the "Intensification-90" Territorial-Sectorial Program made possible, on the one hand, the utilization of additional reserves for economic growth; on the other, they had a positive influence on intensifying the creative activeness of the party organizations of labor collectives. The increased dynamism and specific nature of the party's work helps to develop the necessary work mood and to make positive changes in the main areas of socioeconomic development. Virtually all oblast economic sectors overfulfilled their planned assignments

for the first half of the year. The higher volumes of output were achieved through increased labor productivity. Let us note that in the course of the implementation of the program the average annual growth rates of labor productivity were increased by a factor of 1.3 in the oblast and in Leningrad itself by a factor of 1.5 compared with the start of the preceding 5-year period. The share of superior quality goods increased, in machine building above all; at the same time, the decline in returns on industrial capital was slowed down. Material outlays for commodity output were reduced and the number of workers engaged in manual labor declined.

We are fully justified in ascribing said results to the efficient work of all Leningraders, to the enhanced vanguard role and combativeness of the party organizations and the positive changes which reorganization is introducing in our life.

These trends are entirely consistent with the Basic Directions in the Economic and Social Development of the Country in the 12th 5-Year Period and the Period Until the Year 2000, which stipulate, for Leningrad and Leningrad Oblast in particular, the better utilization of the created scientific and industrial potential, increasing output exclusively through technical retooling and reconstruction of existing enterprises, and a reduction in the number of work places.

These most important problems always remain in the center of attention of party and economic cadres, scientists and engineers. They have been given priority in the activities of all local labor collectives. The experience acquired by the Leningrad Party Organization in production specialization and concentration and search for and mastery of efficient means of combining science with practice fully contributes to their successful solution. The efforts which were made over a number of years made it possible radically to change the structure of Leningrad's industry, based on more than 170 scientific-production and production associations, which account for about 70 percent of the entire output. The collectives are oriented toward the development of essentially new equipment, the systematic modernizing of equipment and technology, and shortening the length of the cycle from the start of a research topic to the production of series prototypes by a factor of 1.5-2.5.

In this connection, the Leningrad CPSU Obkom attributes particular significance to the initiative of party committees of leading associations, such as Svetlana, for instance, which are energetically contributing to the establishment of scientific and technical complexes and their practical utilization in daily work. This efficient method of integrating science with production not only enables us significantly to reduce the labor intensiveness of goods and persistently to enhance their quality but also ensures effective party control over the entire cycle of the development and use of innovations.

The advancement of the economic mechanism was bound to affect most essentially the planning of scientific and technical progress, which is the main link in the system of methods applied in national economic management. Its efficiency was fully manifested in solving vital problems of scientific, technical and social development, based on the long-term forecasting of targets, attaining

high economic results through the implementation of programs backed by the necessary resources. The emphasis in the implementation of the "Intensification-90" Program was on the further intensification of processes contributing to the energetic conversion of industry to an accelerated track of development and the fullest possible utilization of available possibilities and reserves. This includes, in particular, the active participation of Leningrad associations and plants in the broad-scale economic experiment, purposeful efforts to increase the share of small and medium-sized enterprises in the overall volume of output, their orientation toward the requirements of scientific and technical progress and the involvement of a number of collectives in the activities of intersectorial complexes, the purpose of which is significantly to reduce the time between the creation and specific practical utilization of progressive ideas and developments.

The party and government decrees significantly broadening the rights of the executive committees of the Leningrad Oblast and city soviets of people's deputies and their enhanced influence on solving planning problems on the territorial and sectorial level and on the accelerated growth of the production potential and the implementation of social change were of exceptional importance to the area.

In addition to the formulation of a plan for the comprehensive economic and social development of the city and oblast for the next 5 years, all of this enabled us to formulate efficient measures for the technical retooling and reconstruction of production facilities, the qualitative restructuring of the economy and ensuring the faster development of machine building and other key sectors within the national economic complex.

Last year's certification of work places in industry and the study of the investment policy of ministries and planning authorities indicated, in particular, that positive changes in updating and utilizing basic production assets are taking place more slowly than is necessary. Under circumstances in which a significant percentage of work places must be modernized or even abolished, it frequently becomes necessary, as in the past, to oppose the faulty trend of increasing production by building new enterprises, supported by some economic managers.

We also took into consideration the fact that in the last decade a trend was noted in industry, in machine building in particular, of a gradual conversion from a two- to a one-shift work for most of the equipment. This adversely affects the development of the national economy as a whole and significantly worsens the implementation of the program for the city's and oblast's economic intensification.

In this connection, the suggestions of the oblast party organization, considered and approved last May at a meeting of the CPSU Central Committee Politburo, are reduced to substantially restricting the groundless expansion of enterprises operating with old technical facilities, and ensuring the qualitative reorganization of operating capacities by working in two or three shifts. This equally applies to experimental and testing production facilities.

Computations indicate that such measures will contribute to the removal from industrial enterprises of about one-third of the essentially morally and physically worn-out equipment, thus releasing production areas for subsequent technical reorganization. This will also enable us substantially to improve the utilization of the active share of the basic production capital, to increase the intensification of public production and to put in economic circulation additional reserves for improving labor efficiency and for significantly upgrading production quality.

This approach, the June CPSU Central Committee Plenum emphasized, opens a very promising trend of accelerated development in public production. This high rating means a great commitment by the people of Leningrad and predetermines the extent of their responsibility for the strict implementation of the planned measures.

Therefore, today the region has an effective lever for accelerating the conversion of the economy to the track of intensification.

The oblast party committee stipulates the implementation of these measures within the framework of the basic economic indicators for the 12th 5-year period set by the USSR Gosplan. Together with the ministries, and within the allocated limits, capital investments will be channeled primarily into reconstruction and technical retooling.

The future of the already comprehensively developed extensive efforts greatly depends on the constructive position adopted by ministries and planning bodies and the efficient statesmanlike approach to solving problems of new construction and expansion of operating capacities, which must be closely related to the maximally efficient utilization of the already existing production potential. It is also necessary for the investment policy to guide the leading design organizations to a greater extent toward solving problems related to the technical retooling of operating enterprises. So far, the share of such developments remains extremely insignificant in the plans of the institutes, averaging between 3 and 19 percent of the total.

The specific ways of improving the efficiency of utilization of basic production capital, converting the entire industry to a multiple-shift work system and radically improving the quality and operational features of output, above all in machine building, were defined at the conferences which were held in Leningrad with the participation of senior personnel from the CPSU Central Committee, ministries and departments, and the party, soviet and economic aktivs. This includes the simultaneous removal of morally and physically obsolete equipment and the implementation of plans for the technical retooling of industrial enterprises within the stipulated capital investment limits.

The Leningrad party members clearly realize that the main burden in the major set of efforts to ensure the organizational restructuring of the production process and the economic thinking of cadres must be assumed by them. The inventory taking of basic capital, which took place in the course of the certification of work places, laid a good foundation for the qualitative and faster implementation of projects. The expected share of removal and renovation of equipment make it possible not only to ensure the use of work

places at full capacity without increasing the personnel but also to upgrade the shift coefficient to 1.7-2.

The extensive exchange of views among labor collectives in the city and oblast indicated that the overwhelming majority of workers, engineering and technical personnel, foremen, and production managers properly understand and support such extremely necessary and efficient steps. Many production collectives in the city and oblast are preparing for conversion to the new economic management conditions with a high feeling of responsibility. The forthcoming problems and the ways to resolve them were considered at expanded party committee sessions and meetings of the party-economic aktivs at enterprises in machine-tool and instrument manufacturing, shipbuilding and many other sectors.

The inventory taking of metal processing and technological equipment has been completed and a comprehensive technical and economic study is currently taking place of the organizational structures of production management. The formulation of specific proposals for the removal of physically and morally obsolete equipment, and the freeing of production areas and their further utilization is nearing completion. The sociodemographic structure of the workers has been refined and proposals are being formulated on social problems.

Today we can already speak of some practical results of the implementation of priority organizational, economic and technical steps. Thus, until recently, the Kirovskiy Zavod Association was contemplating the stopping of the main tractor-assembly conveyer belt for the purpose of reconstructing it for the production of the new K-701M model, which would have resulted in a shortfall in the production of thousands of tractors.

The new approach enabled us to find an essentially different solution. The real possibility of releasing 14,000 square meters of production area and installing the new conveyer belt without interrupting production was presented as a result of removing worn-out equipment and rearranging operating equipment.

The Elektrosila, Lenpoligrafmash, Leningradskiy Metallichесkiy Zavod, Znamya Oktyabrya, Admiralteyskiy, Machine Building imeni Ya.M. Sverdlov and many other associations are adopting a creative and practical approach to such problems. They have set deadlines for removing and replacing obsolete equipment for each individual shop. Essentially, new equipment will be installed only as a replacement of obsolete machinery.

The sectorial institutes and their experimental production facilities have become actively involved in the conversion to the new system, alongside the industrial enterprises. The TsNII imeni Akademik A.N. Krylov, which is the scientific center of the shipbuilding sector, intends to convert one-of-a-kind scientific equipment to a three-shift, and its experimental-testing production facility, to a two-shift work system.

The new approach to the use of productive capital calls for changes in the existing organizational structure of production management and in its level of

concentration and nature of development of intraproduction, sectorial and intersectorial specialization and cooperation. However, as a result of the underdeveloped nature of economic relations in manufacturing goods for general machine building use among regional enterprises, and the retention of itemized-closed production, artificial difficulties are being created, which adversely affect the pace at which productive capital is being withdrawn and renovated. As a result, some economic managers are displaying an unwillingness to part with surplus equipment, although in some cases such equipment is used no more than a few hours monthly. Ensuring a decisive conversion to intensive economic management methods and redirecting the cadres in the spirit of the time are the most important tasks facing the party organizations of Leningrad and its oblast today.

The need for a nontraditional approach to the new construction projects, machines, machine tools and other equipment is made necessary by the increased volume of technical retooling. For example, technical solutions are already available which enable us to reduce the weight of substructures with the help of vibroinsulating systems. This method was applied at the "5000" metal sheet-rolling mill of the Izhorskiy Zavod Association and many other enterprises.

The next step in the same direction is the foundationless installation of equipment. The extensive use of bed-plates will substantially lower the cost of handling equipment sets in accordance with technological changes. All such problems must be solved this very 5-year period.

Computations made by planners indicate that the number of workers in the afternoon shift will increase by a factor of 2.5. In this connection, the conversion of industry to a two- or three-shift work requires a radical review of the functioning of the social infrastructure of all enterprises and all organizations--transportation, services, children's preschool institutions, schools, technical schools and VUZs. Therefore, it is a question of an economic problem, the solution of which vitally depends on a suitable social policy.

As instructed by the oblast party committee, the executive committees of the local soviets of people's deputies, and the economic managers have drafted a number of steps to convert the urban economy, transportation, cultural, health care and education establishments to the new working conditions. The work schedule of industrial enterprises has been refined in such a way as to ensure optimal conditions for highly productive work by all shifts.

As of now many enterprises are making successful use of a number of incentives for night-shift workers, including higher wage rates, wage supplements, payments based on annual results and free food.

Good end results are possible only if we make maximal use of the substantial opportunities available to production collectives in encouraging multiple-shift work and creating comprehensively favorable working and living facilities by taking them fully into consideration in drafting the collective labor contracts.

The organizational restructuring of production facilities and of the social infrastructure which has been undertaken, is considered by the CPSU obkom an important link in the implementation of the party's new economic strategy, the purpose of which is to make the acceleration of the socioeconomic development of the country's national economy more dynamic.

The party organizations play a leading role in the radical conversion of the region's economy to intensive development. City and rayon party committees regularly report on the course of the implementation of the Intensification-90 Program at obkom buro sessions. Nevertheless, the intensified and more specific study of their activities indicated that the region as a whole has still more substantial reserves. They are found in the planned and methodological support of programs and the coordinated efforts of scientific research, design and engineering organizations for the development of new equipment, matching or superior to the best worldwide models. The practice of sharing and disseminating experience must be perfected. Stricter and more regular control over the implementation of assignments is needed. Finally, efficient means are necessary, enabling us to surmount mental stereotypes and the passive attitude of some cadres, who have been unable to eliminate the inertia of obsolete habits and views, and who must psychologically and organizationally reorganize their work under the new circumstances.

In order to solve these problems, the executive committees of the Leningrad Oblast and city soviets of people's deputies set up a coordination center for the implementation and further improvement of the Intensification-90 Program. They consist of members of the planning commissions of executive committees, the Northwestern Branch of the Central Scientific Research Economics Institute of the RSFSR Gosplan and the Leningrad Data Processing and Automation Institute of the USSR Academy of Sciences. At the first stage, one of the leading trends in the activities in the coordination centers has become the study and development of a program on the rayon level. This approach is aimed at most closely coordinating the work indicators of specific enterprises and organizations with the overall objectives and tasks of the region and the individual sectors. An expert evaluation of intensification programs of city and oblast rayons was conducted and approved by the center with proper corrections.

One of the features of the territorial-sectorial program, which is assuming substantial importance in the exercise of control functions, is the fact that governmental statistics enable us today to follow the implementation of assignments more efficiently.

At the same time, in accordance with the requirements of the CPSU Central Committee, the oblast party committee is persistently pursuing a line of streamlining information, including economic data, received by the party committees. The reorganization in this area enables us to optimize the information flow and make such information more efficient and specific. In this case substantial importance is ascribed to distinguishing among the functions of party, soviet and economic bodies, the skillful organization of statistical work and the significant reduction in the number of requests and reports of secondary importance.

The most efficient ways and means for the efficient utilization of economic information are being applied; in particular, this includes so-called information on deviation from planned levels, which enables us actively to influence decisions made by party committees. As a whole, the broadest possible array of means is used enabling us steadily to perfect the work style of party committees, directing them not toward drafting papers and minutes but engaging in live and initiative-minded work with the masses, strictly observing the principle of unity between words and actions and openness, the lack of which inevitably has an adverse effect on the entire course of reorganization.

Clearly, the implementation of the CPSU programmatic requirement, which calls for upgrading the role of the human factor in all areas of social life, directly depends on the further strengthening of the authority and increasing the influence of party organizations in all labor collectives without exception. Today such authority can be acquired on the basis of new criteria, a new quality of party work and an exigent assessment of accomplishments and available possibilities, firm support of criticism and self-criticism and a systematic struggle for the assertion of anything progressive and for order and discipline.

The thorough approach to this matter taken by the Kalininskiy, Moskovskiy and Lomonosovskiy Raykoms and the Vyborg and Gatchino Gorkoms is noteworthy. Their personnel has adopted as their standard personal participation in solving arising problems directly at primary and shop party organizations and party groups. The work rule of the Nevskiy CPSU Raykom calls for holding a shop party organization day and a party group day; it has introduced the practice of organizing on-site sessions by the buro of this party raykom directly at enterprises. In a number of CPSU gorkoms and raykoms senior personnel are conducting certifications, the result of which are truly affecting the placement of cadres. The course of implementation of said recommendations is kept under strict supervision.

The working people of the town and oblast are actively contributing to the initiated renovation process, reacting sharply to the course of reorganization of the work of party, soviet and economic bodies. This is confirmed by the increasing number of appeals and suggestions to party committees and executive committees of local soviets of people's deputies on a great variety of problems.

The stipulation of the political report to the 27th CPSU Congress to the effect that no reorganization or change is possible unless all party members, managers in particular, realize the tremendous importance of the practical actions which alone can ensure progress and upgrade labor efficiency, assumes particular urgency and relevance today.

The process of promoting fresh forces and reinforcing the reliable cadre personnel of the oblast party organization, initiated after the congress, has become even more purposeful and dynamic. Today the most important sectors in party and economic building are entrusted to people who know how to think in terms of the new categories and who approach responsible decision making independently and creatively.

Many party committees and party buros have set up an efficient system for the certification of party member-managers and rank-and-file engineering and technical personnel; a special character reference form has been drafted, taking into consideration the person's production activities, moral and political qualities and participation in social life.

The number of reports submitted by managers to their party organizations is increasing in such organizations; the decrees they pass are becoming more specific. As a rule, problems involving the imposition of party penalties to managers are considered by the primary party organizations. A similar line is being systematically followed at the Baltiysk Plant imeni S. Ordzhonikidze.

Work in this area contributed to the fact that a number of initiative-minded and energetic party members were promoted to leading positions, people who can sensitively feel the pulse beat and the needs of the time. Many of them are not only experienced managers with good practical training, but also talented young organizers, who were able fully to prove themselves in the course of the reorganizations. Their political and practical qualities, which are real and supported not by words but by specific accomplishments, and their ability to mobilize collectives for the implementation of assignments, are comprehensively being adopted as the most important criteria for such promotions or transfers.

The method of appointing or confirming a party member to a responsible position, with proper recommendation not only by the party organization but by the labor collective as well, is becoming increasingly popular. The superior party authorities are persistently seeing to it that such recommendations objectively reflect both the qualities and shortcomings of the person, for the greatest possible attention must be paid to the correction of the latter.

Extensive publicity and strict control which, nevertheless, has nothing in common with annoying petty supervision, is a major incentive in upgrading the level of political maturity of an economic manager. Taking this into consideration, an active search for new forms of work with cadres is taking place involving the energetic practice of talks, reports, and personal references. For example, Frunzenskiy Rayon in Leningrad is experimenting with the certification of economic managers with the participation of all the members of labor collectives. A number of enterprises are preparing to organize competitions for filling some worker positions. Experimentally, six city rayons are testing a comprehensive "Cadre" program. We expect its implementation to yield positive results.

As they develop and intensify the acceleration of the socioeconomic reorganization, the party committees now frequently direct economic managers to become members of shop party organizations in production facilities related to their functional duties and where presently the most difficult production problems are being solved. Naturally, reorientation in party work does not promise managers a calm life. However, as practical experience indicates, this precisely is what active people, who tolerate no ostentatiousness, verbosity and stagnation, like. Those who merely try to adapt to the new spirit without changing anything essential, are today being exposed to impartial but fair and uncompromising criticism, the weapons of which, as we

know, can not only wound but also efficiently cure. It is precisely this approach to evaluating the activities of leading cadres that is urged by the party obkom, which sets stricter requirements concerning them in accordance with the changes introduced in the CPSU statutes.

Nevertheless, we cannot fail to be concerned by the fact that some economic managers have still not abandoned the obsolete custom of shifting responsibilities to other people. When reasons for the nonfulfillment of planned assignments by a rayon, enterprise or farm are considered at sessions of the oblast CPSU committee buro, their managers occasionally try to replace a critical analysis of the situation with references to the unsatisfactory work of suppliers, transportation workers or anyone else as long as they themselves do not have to be held responsible. The firm and principle-minded stance taken by party committees and buros of primary and shop party organizations is exceptionally important in uprooting such an attitude toward assignments.

The solution of problems related to perfecting work with cadres under the conditions of the intensification and reorganization of the economic mechanism directly depends on the training and raising of talented production organizers and specialists, who can actively influence the acceleration of scientific and technical progress. It is a question of the technical retooling of industry, the production and mastery of the latest high-efficiency machines and equipment and the use of efficient technological processes to take place together with proper cadre support.

The party organizations deserve great credit for the fact that the Leningrad VUZs and leading vocational-technical schools have been able to reorganize themselves quite rapidly in terms of the new requirements. Every year they are graduating tens of thousands of engineers and skilled workers in the specialties and professions needed for the implementation of the Intensification-90 Program.

Today it is necessary to upgrade just as energetically the value of VUZ diplomas, as stipulated in the CPSU Central Committee draft "Basic Directions in the Reorganization of Higher and Secondary Specialized Education in the Country." In order to achieve this we must, in particular, surmount decades of developed consumerist attitude of industry toward the higher school and upgrade the level of its participation in strengthening the material and technical facilities of institutes, in forecasting the need for specialists and in drafting their training programs.

For the same reason we must enhance the level of interaction between enterprises and vocational-technical schools. Over the past 15 years 100 modern PTU complexes were built in Leningrad and its oblast, at a cost of 180 million rubles. However, their training-production facilities were developed substantially more slowly and today urgently need updating and retooling with modern equipment. The Leningrad CPSU Obkom is directing the party committees at base enterprises to the need to solve such problems alongside the reconstruction and technical retooling of existing production facilities.

The new developments are insistently and persistently knocking at the door. This was manifested most emphatically in the course of the discussions held by primary party organizations of the tasks stemming from the resolutions of the 27th CPSU Congress. The frank and creative spirit of this high communist forum was shifted to the majority of party meetings where not only constructive criticism of production and social shortcomings was voiced but also practical and innovative proposals for correcting them were expressed.

Vladimir Ilich Lenin called for "less intellectual and bureaucratic arrogance and more study of what our central and local practical experience has acquired and that which science has already given us" ("Poln. Sobr. Soch." [Complete Collected Works], vol 42, p 347).

The CPSU obkom set up a method council especially designed to study, sum up and disseminate progressive experience in the work of party committees and primary party organizations. It includes party personnel and representatives of many scientific institutions in the city. Sixty-six basic primary organizations were assigned to work, with the help of the corresponding council section, on the entire set of problems for the study and summation of progressive experience in specific areas of party work.

Under the guidance of the CPSU obkom, the council plays an important organizing role in the active search for, assessment of efficiency and extensive dissemination of anything that is progressive and is in practical use, and of the new means and methods applied by the local party committees. Its important functions are to provide constant and specific aid to party committees and primary organizations in their development as basic units, to publish the "Address of Progressive Experience" collection, to draft method recommendations and to participate in training the party aktiv.

The 27th CPSU Congress noted the experience of the Leningrad party organization in the formulation of intensification programs on the basis of the acceleration of scientific and technical progress, the integration of science with production and socioeconomic planning. This assessment assigns great responsibility to us for the purposeful and persistent search of new and efficient ways of implementing the party's strategic course.

The party members, who must pass the test of time at this sharp turn in history and whose ability to act persistently and energetically must be tested, are at the leading edge of this comprehensively developed extensive and major work in the area. Here the highest attention is paid to socialist competition, which must contribute to shifting the economy to an intensive track, reorganizing the economic mechanism and extensively applying collective labor organization methods. To this effect we must clean the competition from the rust of formalism and restore its inspirational and competitive nature, without which a person cannot fully bring his professional skill to light. Its main objectives, as the CPSU Central Committee Appeal to the Working People of the Soviet Union emphasized, is upgrading labor productivity, improving production quality and conserving resources.

At the beginning of this 5-year plan, a valuable initiative was originated in Leningrad by the workers who were delegates to the 27th CPSU Congress; to

complete the assignments of the first 2 years of the 5-year plan by the 70th anniversary of the Great October Revolution, on a high-quality level and with the economical utilization of all types of resources. This patriotic initiative was approved by the oblast party committee and extensively and practically supported by the labor collectives. It is closely related to progressive economic management and labor organization means and methods.

We ascribe an important role to the mass information media in restructuring the economy and, above all, the thinking of the people. We are directing them toward aiming the entire force of the party's words to enabling every individual to feel the urgency of this period and its crucial nature.

The Leningrad party members consider the enhanced degree of party influence on the life and accomplishments of collectives, the development of the competition, initiative and live creativity to be decisive prerequisites for success in the main areas of the struggle for economic intensification.

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## STRATEGY OF ACCELERATION: THEORY AND PRACTICE

### MAJOR LINK OF RENOVATION. KOMMUNIST ROUND-TABLE DISCUSSION AT THE NOVOLIPETSK METALLURGICAL COMBINE

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[Text] The initial results of the work done after the 27th Congress were summed up at the June 1986 CPSU Central Committee Plenum. Literally every working day in the country is irrefutably and objectively proving the accuracy of the plenum's conclusion that Soviet society has been set into motion after the congress in all areas--political, economic and spiritual--and that the powerful dynamic charge of social development triggered an influx of political self-awareness by the masses. The atmosphere of strictness, exigency and truthfulness, which prevailed at the congress, is having a mobilizing influence on all practical affairs. The Soviet people are responding warmly to the party's innovative initiatives, supporting them and decisively seeing to it that the reorganization is comprehensive and efficient.

As was emphasized at the June plenum, the 12th 5-Year Plan is a decisive stage in the implementation of the strategy of accelerating our country's development. This will require intensive efforts. That is why the CPSU Central Committee appealed to all working people to engage in "Inspired Creative Labor in the 12th 5-Year Plan!"

The 5-year plan and we are an indivisible entity. Its successful implementation and the successful start of the long-term strategy of acceleration and the renovation of our life, which will bring it closer to the communist ideal, depend exclusively on the coordinated efforts of all of us.

We are fully justified in considering the labor collectives of enterprises and associations the main link of the renovation. It is precisely here, more than anywhere else, that the energy of the plans turns into the energy of practical actions which ensure the real acceleration of the country's socioeconomic progress. It is precisely here, in the main cost accounting link of the social production process, that the practical lessons which help millions of Soviet people to learn how to think and work in a new style are being taught in a more lively and clear way than elsewhere. It is precisely through the labor collectives that the front line of the struggle between the new and the old runs, in the course of which the processes of enhancement of all aspects of human and social activities are gathering strength and yielding their initial tangible results. It is precisely here that the new theoretical

problems, which require new scientific approaches and solutions, are manifested tangibly and sharply.

The editors of the KOMMUNIST held a round-table meeting at the Order of Lenin and Order of the October Revolution Metallurgical Combine imeni Yu.V. Andropov in Novolipetsk. It was attended by managers and senior workers of the Lipetsk Oblast and city party organizations, USSR Ministry of Ferrous Metallurgy, USSR Gosplan, USSR Ministry of Public Health, USSR State Committee for Hydrometeorology and Environmental Control, Lipetsk Oblast Executive Committee, Glavlipetskstroy, Lipetsk Polytechnical Institute, and Central Scientific Research Institute of Ferrous Metallurgy, economists and other scientists.

The site of the meeting was dictated by the fact that the Lipetsk Oblast Party Organization is one in which the party members are energetically and purposefully solving problems of economic and social development and that the thousands-strong collective of the Novolipetsk Metallurgical Combine, which is presently the most technically advanced enterprise in the sector, is making a substantial contribution to such work. The combine's collective was able to implement the 11th 5-Year Plan in its essential lines and take a confident start in the 12th. Since January 1985 the people of Novolipetsk have been working under the conditions of the large-scale economic experiment of broadening the rights of production associations (enterprises) in planning and economic activities and increasing their responsibility for work results.

Following is the first part of the account on the meeting which was held at the beginning of June, prepared by V. Kadulin and N. Tyurin, KOMMUNIST special correspondents.

Yu.A. Manayenkov, first secretary of the Lipetsk CPSU Obkom:

Slightly less than 100 days have passed since the 27th CPSU Congress. However, even that time convincingly proved that the congress had made far-sighted, responsible and constructive decisions, indicating the high political and moral standards of party activities and local organizations and labor collectives.

In order to ensure the country's socioeconomic development and, even more so, to attain, on this basis, a qualitatively new condition by our society, a tremendous amount of work must be done. Above all, the reorganization of the thinking and mentality of the people and the content, forms and style of their activities must be accomplished within the shortest possible time.

The oblast party committees and primary party organizations are currently working on turning the concept of acceleration into a conviction, into the life stance of party and nonparty members. The Novolipetsk Metallurgical Combine did not begin this reorganization yesterday; it is already having a tangible effect on the renovation of all forms of life of this very experienced collective.

In order to make the acceleration real, a new technical reconstruction of all economic sectors must be accomplished; socialist public production must reach

the most advanced level. We have no right to lose even a single day in this work. That is why we are particularly pleased by the fact that the building of the first section of the cold rolling shop for dynamo steel is nearing completion at the Novolipetsk Combine considerably ahead of schedule; its capacity will total 480,000 tons of electrical engineering steel sheets annually. The ahead of schedule completion of this section will be of great economic significance. A number of examples could be cited of creative searching, which noticeably intensified in the collective after the April 1985 CPSU Central Committee Plenum. I believe, however, that the combine workers themselves will describe this better and more fully. Unquestionably, all aspects of the life of this outstanding collective provide the richest possible study data.

I.T. Frolov, KOMMUNIST editor-in-chief:

Naturally, our meeting at the Novolipetsk Combine is not accidental. We wish to describe to the millions of readers of KOMMUNIST the experience of this progressive collective, the positive results it has achieved and the problems and difficulties it has encountered at the very beginning of the reorganization of production activities and of our entire life, which the party has undertaken.

Naturally, the problems which arise here are more or less specifically those of a region, oblast or enterprise. Nevertheless, some common features exist as well, determined by the party's general line and its formulated strategy of acceleration of the country's socioeconomic development. Therefore, we hope that the story of this meeting and the thoughts and suggestions expressed by its participants and published in the journal, will help to stimulate further collective search for optimal answers to problems raised by life and social practice. It is important for their discussion to be frank, in the spirit of the lessons in truth taught to us by the 27th Party Congress, so that the participants in the meeting will not avoid sharp debates, without which the way to the truth becomes much slower.

In order for our joint work to be successful, it is also important to see to it that the components of the acceleration are analyzed as a set, in their organic interconnection. For it is entirely clear today that the line of acceleration, the strategy of acceleration can be fully implemented only if we are able to put into motion all factors--scientific and technical, organizational, economic, social, cultural and of ordinary life. The decisive factor of acceleration--the human factor--must, we believe, mandatorily be considered on a comprehensive basis, in the full variety of its manifestations and in all areas of action without exception, including what is known as "human ecology" in the broad meaning of the term. It is only with such a comprehensive approach and with the comprehensive reorganization of all aspects of our life and work that we can ensure real accelerated progress along the path indicated by the 27th CPSU Congress, which will enable us to achieve the actual qualitative renovation of socialist society.

From Worker to Minister

Hero of Socialist Labor V.P. Kosyakov, senior attendant, Blast-Furnace Shop No 1:

The April Central Committee Plenum made us look back and think of how we worked in the past, and realize that one can no longer work this way. In the months since the congress, it seems to me that everyone, from worker and kolkhoz member to minister, realized the tasks which face the party and the country. We must engage in specific actions if the acceleration is to become truly noticeable.

Let me speak of my collective. What does acceleration mean to the blast-furnace attendant? It means to increase the smelting of quality pig iron every hour, day and year. It is time for us to abandon the constant pursuit of tonnage. We must smelt quality metal, as good as the one smelted abroad.

How did we, blast-furnace attendants, begin the reorganization? With discipline in the brigade. It is no secret that until recently some people came to work tired and occasionally tipsy. Such a so-called worker would begin his shift and the foreman would not remove him. Hand him a broom, let him sweep the floor! Meanwhile, such floor sweepers earned the same amount of money as those standing by their place at the blast-furnace. Was that proper? Now, the system is the following: if someone enters the shop with smell on his breath or was sent to the sobering-up institution, he may say good-bye to the bonus and will lose his turn in the waiting line for housing. It was feared that the application of this system would make people leave and increase worker turnover. Our fear proved unjustified.

Our brigade has assumed increased obligations for the 12th 5-Year Plan: to produce 5,000 tons of pig iron above the plan. I am confident that we shall keep our word. However, we could do even better, for the brigade assumed its obligations on the basis of prevailing conditions which, unfortunately, cannot provide an impetus for acceleration in the work.

Here is an example. As a rule, with the winter supplies of natural gas to the blast-furnace become irregular. We are told that natural gas must be conserved and the people's kopeks saved. However, by saving a kopek we lose thousands and thousands of rubles. For reducing the amount of gas fed to the blast-furnace leads to a tremendous overexpenditure of electric power and coke, which, as it were, is already in short supply. Oxygen is lost. This leads to a drop in labor productivity and pig iron output. The most characteristic feature in this case is that while speaking about economy day after day, we are still not controlling this process. We have no reliable meters to record outlays of natural gas, oxygen and air.

High-grade pig iron demands more than the good work of blast-furnace attendants; it requires proper quality agglomerate and coke. Quite frequently faulty production by the agglomeration and coke-chemical production facilities leads to defective output by the blast furnaces. For example, not only we, blast furnace workers, but also the workers of the converter shops and the metal rolling workers lose from the excess of sulfur in the coke. Why is it

that our progressive combine is still tolerant of waste makers and wreckers? The ministry as well should answer some questions. The blast-furnace attendants are experiencing great difficulties caused by the different types of raw materials supplied to the combine. For example, we receive three different types of pellets with different chemical composition. With such variety how can we produce high-quality pig iron!

Periodical capital repairs of equipment are a specific feature of our work. Today much is being said about the fact that this must lead to substantial modernization of equipment and technology. What does actually happen? Blast-furnace No 5, serviced by our brigade, was repaired. As the result of changes in the lining, we now produce 100 tons of pig iron per 24 hours more than in the past. The furnace became much cleaner after a suction system was installed. Nevertheless, I believe that the reconstruction was not carried out to the end, for all of our work methods have remained unchanged, for decades. This is the fault of the partial, the "scrappy" approach to problems of equipment updating. For example, we were supplied with jackhammers with which to clear the furnace gate. They are easy to handle and small. However, all we gained was that the furnace gate became wider. Productivity did not increase but even declined. The jackhammers we used in the past were cumbersome but faster. Now, for some reason, the speed is slow. I believe that the machine builders must adopt the rule that before introducing one type of equipment or another they must consult with the people who will be using such equipment. This would eliminate many errors.

Nor have I noticed any particular change in the organization of repairs. Once in a while there is breakdown in material procurements. For example, the making of cast cinder troughs was undertaken but, for some reason, this did not work out. The troughs were then made of steel sheets, lined with bricks. Now such slag troughs burn out frequently and crack at the seams. They will have to be replaced very shortly. Several months ago the ahead of schedule start-up of the furnace was reported. Meanwhile, the casting area is still not in order. The bricks were brought in but not laid. Many such faults exist. Such "ahead of schedule" start-ups affect the work of the blast-furnace attendants. Try to smelt good pig iron while all around you unfinished work is being completed!

Another thing that concerns us today is the high overexpenditures of puddled iron ball and batching materials. The reason is that they are significantly less durable than similar materials used by foreign firms. In Japan, for example, the special compounds used for lining the furnace troughs are several hundred percent more durable than ours. Here is another fact: in the past we were receiving dampers for hot blowing, provided by the West German Zimmerman Company, which lasted 18 to 24 months. Those made domestically are good for 6 to 8 months. Are our machine builders unable to think of something? Are they unable to prove to the foreign companies that they too know how to work? It takes as much as 3 hours to replace one such valve. Meanwhile, the furnace remains idle. How much pig iron do we lose because of this?

**The Simple Facts:**

The Novolipetsk Metallurgical Combine (Plant until 1983) was built in accordance with the resolutions of the 14th Party Congress on the industrialization of the country's national economy. The first pig iron smelt was produced on 7 November 1934.

Today the combine is a powerful modern enterprise with a complete metallurgical cycle, oriented toward the production of a wide variety of metal sheets. On 1 January 1986 the balance-sheet worth of its productive capital was 3,201,000,000 rubles. The enterprise has 88 shops and production facilities.

The combine's annual blast-furnace and converter output is 9.6 million tons of pig iron and 9.5 million tons of steel; its mills produce 6.1 million tons of rolled metal. The combine manufactures about 300 types of commodity output. Its customers include more than 8,000 enterprises, associations and organizations in the country. Furthermore, the Novolipetsk Metallurgical Combine exports its goods to 21 foreign countries.

The combine fulfilled its 11th 5-Year Plan for basic types of output (with the exception of pig iron). Output worth 125.9 million rubles was marketed above the plan (1.5 percent). The labor productivity plan was fulfilled 101.3 percent. During the 5-year period labor productivity increased 18.4 percent. The cost of output was lowered by 0.4 percent compared to the planned figure.

A total of 1,745 combine workers were awarded USSR orders and medals and 10 were awarded the title Hero of Socialist Labor for reaching high production indicators.

The collectives in the sector have successfully began the 12th 5-Year Plan. In the first half of 1986 the country's national economy already obtained 1,519,000 tons of cast iron, 1,602,000 tons of steel, 633,000 tons of finished rolled metal goods, 99,000 tons of pipes and 2,351,000 tons of iron ore above the plan.

**A.I. Teplenichev, combine party committee secretary:**

In his Togliatti speech, Comrade Gorbachev said that the implementation of the 1986 plan will be the first major test and specific answer of the labor collectives to the resolutions of the congress. Our combine's collective fulfilled its plan for the first 5 months of the year for all technical and economic indicators. This was helped by the reorganization of the style and ways and means of work of the combine's party organization, the most important component of which is cadre selection, placement and upbringing and the intensified party influence in all production sections and areas of social life. We are trying to see to it that every manager, whatever his position, act in an initiative-minded way, look ahead and daringly solve problems which only yesterday seemed impossible.

We must most honestly say that the reorganization is not taking place as energetically as we would like. It turned out that by no means do all

managers understand how to adopt a new work style and are unable firmly to discard customary mental stereotypes. By force of habit, many shop party organizations and economic managers try to solve the new problems with old methods. Here is an example of what this could lead to:

Quite recently the question "On Reducing Above-Norm of Spare Part and Shift Equipment Surpluses" was debated at a party committee session. The situation is changing extremely slowly. Shop chiefs, including even the best among them, do everything possible to have a reserve of spare parts and equipment, the more the better. They know perfectly well that this is bad, and that such hoarding harms the economy. However, they are unwilling to abandon this practice, not trusting our procurement authorities. They would trust them if they see that the procurement authorities are also reorganizing their work. Reorganization started in any given unit, inevitably triggers a chain reaction of changes and ensuring its unrestrained development is the most important concern of the party committees and economic management bodies on all levels.

Whereas reorganization has begun at the combine's collective, in my view one could not be so confident about it in the case of many central departments which determine the end results of the activities of hundreds and thousands of labor collectives.

Actually, today we can reasonably claim that the capital repair of the main unit should be carried out on a parallel basis with its technical reconstruction, which will increase volumes of output, upgrade quality and improve working conditions. Naturally, the workers are awaiting this repair and the reconstruction. And unless the entire set of measures promised to the collective is implemented, our reputation will drop immediately. The same could be said of the wasteful use of the labor of combine workers in the sovkhozes we sponsor and of cases of wage equalization. More than ever, today words and actions must be the same. If you have promised something you must keep your word!

V.A. Brus, combine deputy director in charge of economic affairs, candidate of economic sciences:

Here, at the combine, we learned a great deal as we prepared for the participation in the large-scale economic experiment, together with five other sectorial enterprises, as of 1 January 1985. The extensive economic training of cadres on all management levels was organized. Its objective was not only to study the experience of enterprises in various sectors, which had started the experiment 1 year earlier, and to study the respective regulations and ministerial orders. It was important to awaken interest in the experiment and make the entire collective enthused with the idea.

Let us particularly note that the conditions under which the collective started its 1985 plan were quite unfavorable compared with work in 1984. Thus, the plan called for two first-grade capital repairs at two blast-furnaces. As a result, compared with the level of output reached, we would lose nearly 360,000 tons of pig iron, 100,000 tons of steel and about 150,000 tons of finished rolled metal items. Monetarily, the volume of commodity output, compared with the previous year, would decline by nearly 50 million

rubles, or 3 percent. This meant lower profits and improper correlation between the growth rates of wages and labor productivity. Had the combine failed to convert to a new work style, we would face the prospect of worsened planned work indicators. For at an enterprise with machinery with high unit capacity, which must periodically undergo repairs, such occasional drops are inevitable. On the eve of the experiment, however, we were not particularly pleased by such prospects. For that reason, we started thinking of how to improve the plan indicators and seek possibilities of increasing the volume of output and advantageously to ourselves and to the state change the structure of output, reduce production costs and thus increase profits. We also considered a growth of labor productivity.

This search was stimulated by the fact that the combine's collective had initiated the socialist competition among sectorial enterprises, which had started at the beginning of 1985. The socialist obligations we had assumed were to be the guarantee for the fact that the increased plan indicators would not only met but also exceeded. Finally, we were motivated by yet another important circumstance, namely that, for a variety of reasons, in 1981-1982 the combine had been unable to fulfill its plan, for which reason, based on the results of the first 4 years of the 5-year plan, it owed production to the state. This debt was both in physical terms and in money and had to be paid off absolutely. Our collective successfully dealt with this task. Despite the lagging, the 5-year plan was fulfilled. The only area in which we were unable to fulfill the plan was the production of pig iron, due to the lack of raw material in 1981 and 1982.

Following are some results on the work done by the collective in the last year of the 11th 5-Year Plan: above-plan production included 175,000 tons of pig iron, 170,000 tons of steel, and 83,700 tons of finished rolled metal items. In 1985 we were able to reduce production costs by 2.4 percent, whereas for the 5-year period as a whole it averaged 1.6 percent annually. Above plan profits equaled 13 million rubles, or 11 percent more than in 1984. Such an increase in profit, considering last year's difficult conditions, can be considered quite significant.

The large-scale economic experiment in which the combine participated was aimed at ensuring that procurement obligations would be met 100 percent. Last year we met such obligations almost entirely. Anyone with an idea of what work in ferrous metallurgy means would clearly agree with me that in the case of enterprises such as the Novolipetsk Combine or the combine in Cherepovets each hundred tons of the final percentage of implementation of contractual procurements is achieved at the cost of tremendous work and incredible efforts. The number of "disturbing features" in the work of the combine is excessive! We set ourselves the task of neutralizing, one way or another, of limiting the effect of such factors and ensuring the 100 percent fulfillment of contractual procurements during the first year of the 12th 5-Year Plan. We shall try to fulfill this assignment.

I can confidently say that last year we did not derive all the possible benefits from the experiment. Obviously, the reason was that we carried it out on the upper levels of the enterprise's administration instead of on the level of the shops, as was done, for example, at the Magnitogorsk

Metallurgical Combine. It is true that we did try the experiment in some of the shops, somewhat violating directives. The next stage in the development of the experiment will take place this year. The fruits, as the saying goes, must ripen.

Like the other participants in the experiment, through our personal experience we saw both the faults in its concept and the procedure for its implementation. To begin with, as in the past, the experiment directs the labor collective to increase all, including volume, indicators of production activities. The notorious "gross output," condemned a thousand times, is continuing to distort the experiment. Secondly, as in the past, the ministry is issuing to the combine a large number of mandatory indicators. Why? Because they are planned for the ministry by superior economic management authorities. Last year, we made a kind of inventory: we decided to estimate how many indicators we had to plan for and how many to report. Their number exceeded 350! Now everyone keeps saying, acceleration, acceleration! Apparently, someone undertook this to mean that more documents should be drafted. In any case, the number of papers we currently receive not only from our ministry but also from the Gosbank, the Stroybank and the Ministry of Finance is increasing. If we were to make a careful study of each document received by the combine we would never have any working time left. Thirdly, the stability of plan indicators and standards issued to the combine in accordance with the conditions of the experiment is quite frequently violated. Fourthly, and finally, the production collectives are literally swaddled in innumerable instructions and regulations banning this or that. They deprive the collective of the possibility of engaging in sensible economic maneuvering and make virtually all useful initiative punishable. The practice of banning through directives, as one can easily understand, greatly hinders the acceleration of the socioeconomic development of the country and prevents production collectives from adopting a new work style.

A.A. Kugushin, USSR deputy minister of ferrous metallurgy, chief of the Soyuzmetallurgprom VPO:

The work of the collective of the Novolipetsk Metallurgical Combine has always been paralleled by creative successes. The people of Novolipetsk are distinguished by their fast solution of problems which arise in ferrous metallurgy. Therefore, the task of acceleration is not new to this collective. It is ready to deal with it successfully. This conclusion is supported by the tremendous production and economic possibilities of the enterprise and the volume of its marketed output, totaling some 2 billion rubles per year. This conclusion is also supported by the tremendous intellectual, creative and professional potential of the combine, the richest possible labor traditions of the collective and the combat capability of its party organization. Unquestionably, the discussion of the problem of acceleration here, at the combine, will enable us to identify the shoots of new developments, inherent in the work of progressive collectives, and transplant such shoots at other sectorial enterprises.

Today the sector is at a crucial point, predetermined by the resolutions of the April 1985 CPSU Central Committee Plenum, consistent with our national

economy. It is a well-known fact that the work done by the ferrous metallurgy sector in past 5-year periods has been unsatisfactory.

Despite this, however, the sector managed to carry out a number of important assignments. Thus, thanks to the efforts of the NLMK, importing sheets for automobile manufacturing became unnecessary. The problem of electrical engineering and transformer steel was solved with the help of the Novolipetsk, Cherepovets and Magnitogorsk Combines. The metallurgical workers are meeting the needs of construction workers for construction steel.

As in the past, however, the main problem, in the solution of which the Lipetsk metallurgical workers will participate, remains that of steel sheets. The problem of building the "2500" mill at the NLMK has been solved in its entirety. The technical assignment and the plan have been accepted. The mill will be built on a cooperative basis with Czechoslovak machine builders. The first part should be commissioned this 5-year plan.

Currently 14 sectorial programs have been drafted. Their implementation will enable us qualitatively to update all most important aspects of work in ferrous metallurgy, starting with full backup of the blast-furnace process with coke, which is in very short supply today, and ending with the use of secondary resources.

R.Ya. Gugnyak, chief of the USSR Ministry of Ferrous Metallurgy Planning-Economic Administration:

Obviously, everyone has already become aware that for the first time in many years ferrous metallurgy has begun to work efficiently and to fulfill its production plans. It is true that it is fulfilling its plans for contractual procurements by no more than 99.1 percent. The situation concerning the other economic indicators is much worse. We did not fulfill the profit plan for the first 2 months of 1986. The sector finds itself in an exceptionally difficult situation. We owe the state from various credits and bank loans approximately 1.5 billion rubles. In order to repay the debt gradually, we intend this very year to earn an additional profit of 200 million rubles.

For many years economic work in the sector was kept down. That is why today all our cadres face in its full magnitude the task of reorganizing their economic thinking. This must inevitably apply to the leadership of enterprises, associations and the entire sector. Such reorganization is equally necessary for the designer, the construction worker, the brigade leader and the worker. For the time being we are harvesting the results of work related to upgrading exigency, strengthening discipline and bringing basic order. We have still not truly undertaken to use the deep reserves for acceleration. A radical reconstruction of the work lies ahead!

G. Kh. Popov, head of the Moscow State University Department of the Management of Public Production Organization and Methods, doctor of economic sciences:

There is a great temptation, sitting behind this table, to proclaim that in the few months since the 27th Congress there has been a change for the better, that problems are being successfully solved along all lines and that it is

merely a question of the time when the results of the work done will be manifested in full. Previous experience proves, however, that such a simplistic approach in assessing the social situation is entirely inadmissible. It is inadmissible if only by virtue of the lesson in truth which our party taught all of us at its 27th Congress. I believe that the task of accelerating the country's socioeconomic development, which is facing us today, is so complex and broad that statements to the effect that it could be solved in a few months prove only that the problem has not been approached seriously. Those who say today "We have reorganized!" simply fails to understand, it seems to me, the meaning, the scale of the initiated reorganization. Naturally, it would be improper to ignore what has already been accomplished. Nevertheless, one must assess results and the real difficulties of the current work extremely soberly.

The party documents stipulate that a radical reorganization of the economic mechanism is necessary. Everyone seems to agree with this. A check shows that a large number of leading personnel in the administrative apparatus silently proceed in their work from the idea of partial updating of the existing economic management system. As one can easily see, this idea is at the base of all economic experiments carried out in the country. The present economic mechanism is being experimentally tested merely through the addition of other indicators, stricter penalties, etc. However, if we speak of a radical restructuring of the economic mechanism, without which no acceleration whatsoever is possible, we should acknowledge that the main problems affecting it are not on the brigade or even the enterprise level. The main problems must be resolved on the national economic level, on the level of our ministries and departments. The socialist system is a system of centralized and planned economic management. It cannot be optimized without a radical restructuring of the work of the central economic management authorities. The experience of the 1965 economic reform proves this convincingly. The positive results which were obtained on the lower levels as the result of the reorganization of enterprise work were wasted and failed to yield expected results because no substantial changes were made on the level of the ministries and the central planning and financial authorities.

One must clearly see today the danger of the fact that work on the acceleration of socioeconomic development could be reduced to appeals, slogans and orders, or entangled in a variety of meetings. It seems to me that the main reason for the growing avalanche of papers is the fact that the reorganization of the economic mechanism is in the hands of establishments which, by virtue of their position, are not interested in it and who had already once applied the brakes on the economic reform. It would be naive to rely on the fact that their apparatus will favor its self-liquidation. Yet it is precisely this that is required in a number of cases by the logic of the reorganization of the economic management system. Today, according to this logic, profound qualitative changes must be made in the structure, the cadre composition of management organs and the content of their work. In the opposite case, the reorganization may become entangled in instructions and conferences and in a flood of thunderous speeches....

[Editorial note] All of this was said on the eve of the June 1986 CPSU Central Committee Plenum. Its materials and decisions intensified even

further the impression from what was being said at the meeting held at the Novolipetsk Metallurgical Combine. This is understandable, for the CPSU Central Committee Plenum expressed in an extremely clear manner the main, the essential features of the study of the initial lessons of the reorganization. This was done honestly and bluntly, the way the party is discussing with the people today all painful problems.

The ideas of the congress are firmly becoming part of the social consciousness, objectively predetermining the need for the processes under way. However, in addition to the positive trends which predominate in the society, hindering factors exist as well, encountered by the reorganization process. "The past few months have confirmed yet once again that the reorganization affects everyone, from the rank-and-file party member to the Central Committee secretary, from the worker to the minister and from the engineer to the academician. It can be carried out only if it becomes a nationwide project. Anything which hinders this must be decisively eliminated." This conclusion taken from the report by M.S. Gorbachev at the June plenum may, we believe, be used with full justification in describing the atmosphere which is systematically developing in the life of the famous collective of the Novolipetsk Metallurgical Combine. A specific, interested and exigent discussion took place at the KOMMUNIST round-table meeting, covering the most important components of the process of acceleration and, above all, naturally, scientific and technical progress.

#### There Is No Other Choice

A.D. Belyanskiy, chief of the sheet rolling shop No 3, candidate of technical sciences:

The situation which was described by Viktor Petrovich Kosyakov at the very beginning of our meeting perfectly reflects the general situation relative to the combine's scientific and technical progress. This means that a great deal has been and is being done. However, the comprehensive solution of the problem of acceleration has still not been achieved. The example of our shop proves this clearly. Ten to 12 years ago, the collective of the third sheet rolling shop realized the need for systematically updating the equipment at the "2000" mill, which is the basis of the shop. During that time some 8,000 tons of improved equipment were installed, thanks to which, despite a drastic increase in the difficulty of output, annual production not only did not drop but, conversely, increased by 220,000 tons. A record-setting productivity was reached--6.1 million tons of rolled metal per year. We can confidently say that the shop has developed a collective which can ensure at a fast pace the production of high-quality goods and systematically meet all orders in the course of a virtually permanent technical reconstruction.

Such constant reconstruction is not a hindrance but a help in our work. Essentially, the "2000" mill has become an industrial laboratory in which new technology and equipment for wide-strip hot-rolling mills are being tested and developed; this particularly applies to the "2500" mill which the combine is building this 5-year period.

Today our collective is facing a very important task: under the conditions of the further increase in variety as the result of the commissioning this year of the first part of the cold rolling shop for dynamo steel, rolled metal output must be increased by 200,000 tons in 1988 and by an equal amount in 1989. This will require a tremendous amount of work for the further reconstruction of the mill. That which took us 10 years to accomplish must be completed in 3-4 years under the conditions of acceleration. Is this possible? Yes, but providing that we adopt a new work style. By this I mean above all the parallel designing of the machinery, the designing and manufacturing of the equipment and the carrying out construction-assembly and tune-up operations. We must eliminate the totally useless procedure of consecutive completion of the reconstruction stages, which has been followed for decades. Unless we do this, it would take us no less than 2 years merely to coordinate and approve the technical assignment and the planning and construction documents. Understandably, problems of this caliber cannot be resolved without the most active participation of the USSR Gosplan, USSR Gossnab, the USSR Ministry of Ferrous Metallurgy, the Ministry of Heavy and Transport Machine Building and other ministries and departments.

We have acquired experience in the use of a new work style, according to which the individual construction stages are carried out on a parallel basis. A number of machine building enterprises, the Central Scientific Research Institute of Ferrous Metallurgy and the All-Union Scientific Research Institute of Metallurgical Machinery have undertaken to fulfill our orders without waiting for a specific project to be drowned under a totally unnecessary monstrous amount of documents. Let me emphasize, however, that the accelerated pace of the reconstruction has always been based on good individual contacts with plant and institute managers. In this connection, I must recall the good words of the now deceased Academician A.I. Tselikov, who was thoroughly disgusted at routine and bureaucratic distortions. Applying his great authority, he frequently helped us, production workers, to surmount the barriers of innumerable varieties of coordinations. Personal contacts, however, are a rather fragile base for the implementation of everything earmarked for the 12th 5-Year Plan. We need a reliable economic mechanism which will literally force one and all to think and act in the interest of and for the sake of accelerating scientific and technical progress. Meanwhile, we are forced to harvest the fruit of the "procedure," according to which new equipment for metallurgical workers is manufactured at a pace which deprives the very concept of "new" of its meaning...

High production quality means high production flexibility and its ability flexibly to handle equipment and technology. The necessary level of the number of machines and equipment and progressive technologies are becoming today the prime conditions for quality work. Our shop has frequently changed its specialization; in the past 6-7 years it has been fulfilling its plan for contractual obligations 100 percent. Now, however, we have entered a development period in which the old scientific and technical baggage is clearly insufficient. I am confident that success in the implementation of the 5-year plans depends essentially on the speed and efficiency with which we can combine the efforts of institutes, plants, scientists and production workers. This must be achieved regardless of their personal preferences,

inclinations and nature and only on the basis of economic necessity, through the coordination of their economic interests.

V.V. Mikhaylov, deputy combine director in charge of capital construction:

In my view, the acceleration of scientific and technical progress will be the equivalent of the acceleration and reconstruction and technical retooling of existing enterprises. We have acquired significant experience in high-speed construction of complex metallurgical units, such as blast-furnace No 6, the oxygen converter shop No 2, and the shop for cold rolling of carbon steel. What is characteristic here is the fact that we have been able to organize the joint creative work of designers, and construction and machine builders and organizations under the USSR Gosnab.

Naturally, we have had both increases and drastic drops in capital investments. Suffice it to say that at the largest projects the annual volume of construction and installation work has exceeded 100 million rubles. However, there have been periods during which no more than 40 million rubles have been allocated for industrial construction. Uneven planning harms not only us, combine workers, but the construction workers as well. Our main trouble is the lack of firm and stable 5-year plans for capital construction as the last 5-year period proved. Although the new 5-year plan has begun, a plan of particular importance to the country's economy, to this day we have no approved plan. More specifically, the main indicators and volumes of capital construction have been defined but the main feature--a coordinated volume of contracting--is lacking. Without this, you must agree, it is very difficult to discuss matters with contractors, who are unwilling to work blindly and on borrowed time. We cannot plan the load of the machine builders and designers and properly determine the production plan of the combine without a stable 5-year plan. Should the plan be changed, the initiated projects become frozen, the volume of unfinished construction grows and the pile of uninstalled equipment waiting in warehouses grows. Capital construction must become a conveyer belt which will combine all the possibilities of its participants, subordinating it to a single project.

The installation of a "2500" hot-rolling strip mill is planned for the combine. Together with the machine builders and the design and scientific and technical organizations, the combine's workers have already undertaken the implementation of this project. The mill will be based on the latest accomplishments of domestic and foreign experience. In our opinion it will greatly determine the future development of the production of rolled metal items in the world and to us will be a particularly important stage in mastering the new technology. In order to shorten the investment period, which is a mandatory requirement today, we must combine the development and manufacturing of the equipment and the designing of the project within a single technological process, for by 1990 the first stage of the mill must become operational. If we compute the stipulated length of time to cover the entire technological chain, from the submission of technical documentation to the commissioning of the project, 7 to 8 years would be required, assuming that conditions are maximally favorable. We do not have that much time at our disposal.

In addition to new construction, we are engaged in extensive reconstruction and technical retooling of shops and machine units. For example, we completed the reconstruction of the oxygen converter shop No 1, in which steel production has almost doubled. We have completed a number of major reconstruction projects at the "2000" hot-rolling metal mill, as was described here by Andrey Dmitriyevich Belyanskiy. In this case, capital outlays per unit of output turned out to be lower compared to new construction by nearly one-half. It especially benefits the enterprise when a large reconstruction project is combined with plant capital repairs. This considerably reduces the idle time of the machinery. Such experience was gained in the reconstruction of the agglomeration factory last year. The benefit of the reconstruction to the enterprise and the state is obvious. However, the builders and, in our case, the main contractors--the USSR Ministry of Heavy and Transport Machine Building--are reluctant to undertake such assignments which they find unprofitable. The construction workers are morally unprepared for difficult work under the conditions of operating shops. They lack the necessary equipment for such purposes. Such problems must be resolved urgently, for the volume of reconstruction and technical retooling is increasing with every passing year.

The combine pays serious attention to developing construction with our own forces. A general contracting construction and installation administration has been set up, which is working extensively on reconstruction projects on the basis of noncentralized sources and for the technical retooling of shops and machine units, and which is building housing and sociocultural projects at auxiliary facilities. We consider the development of construction with our own forces a reserve at the disposal of the director of the enterprise, above all in solving social problems and eliminating the bottlenecks which have appeared in the production process.

#### The Simple Facts:

At the combine the level of manual work in basic production is 22.3 percent; it is 30.1 percent in machine and mechanism repairs and tune-ups.

The NLMK shops have several dozen ASU for technological processes. Robot technology is being applied.

In 1985 14,063 (88.38 percent of the total) combine work places were certified. A total of 411 work places were closed down and 787 people were released in the course of the certification.

On 1 January 1986 the enterprise had 3,223 production rationalizers. The annual economic benefits from the application of rationalization suggestions and inventions is about 11 million rubles.

In 1985 53 scientific research academic and design institutes, scientific production associations and higher educational establishments participated in the development and practical utilization of scientific and technical projects at the combine.

Twenty-four members of the Novolipetsk Metallurgical Combine were awarded the USSR State Prize; 29 became laureates of the USSR Council of Ministers Award and four were awarded the Leninist Komsomol Prize for the development of new technological processes and metallurgical equipment.

In accordance with the plan for the technical retooling of the sector during the 5-year period, we must, in particular, double our capacity for continuous steel casting and increase the vacuuming process by a factor of more than eight. The reconstruction of more than 110 rolling and pipe mills is planned. Nevertheless, the planned capacity of 89 of the 236 projects which were completed in the sector during the previous 5-year period was not reached.

More than 4 billion rubles are spent for current and capital repairs at enterprises of the USSR Ministry of Ferrous Metallurgy every year.

A.I. Abramov, interim chief of the sheet-rolling shop No 4:

I thoroughly support the most relevant thought expressed Andrey Dmitriyevich Belyanskiy, to the effect that the progress of science and technology yields results only when it applies to all production stages. Otherwise, individual accomplishments are merely patches on old clothes. Both workers and engineers see and feel this.

At the time that our fourth sheet-rolling shop was being built, the design called for the use of the best worldwide accomplishments. This prerequisite was included in all contracts we signed with foreign companies. Naturally, we hoped that the latest equipment, combined with specialists applying modern standards, would provide a quality leap in metallurgy. To a certain extent, we were able to accomplish this, the equipment we obtained was the most advanced and the people were properly trained. Nevertheless we were unable to develop even a single complex to the fullest extent. Why?

To begin with, let me note the constant and extensive faults in VUZ specialist training: as a rule, the youngsters are poorly familiar with computers. Yet computers are the very basis of work in our shop. We are therefore forced to "bring up" the graduates on the job and to restructure their engineering thinking. As a result, electronic equipment is not always used as it should. Furthermore, our labor standards do not take into consideration the drastic changes which the skills needed in servicing complex electronic systems introduce in this area. A boy with higher training joins the shop as an electrician or fitter, for the position of engineer in charge of servicing such systems does not exist. The pay may be satisfactory to the young specialist but this psychological disparity cannot fail to depress him.

Let us assume that such a specialist would come to the Lipetsk Tractors Plant. He would be appointed tune-up engineer and would have the proper salary and professional prestige. In other words, a number of sectors have reacted one way or another to this problem raised by reality. We have raised such questions with the USSR State Committee for Labor and the VPO. So far, however, no one has been willing to solve them. Therefore, having found similar work at other city enterprises, skilled specialists leave the shop.

We are also worried by the situation regarding repairs of imported equipment. In order for the equipment to work reliably, worn out assemblies and parts must be replaced on time and with parts which are at least just as good. What do we have today? Initially we received imported spare parts in amounts precisely stipulated by the contract, after which such deliveries were reduced substantially. We started looking for domestically produced parts and encountered a number of problems.

For example, we would establish that a given assembly produced domestically has the technical specifications we need. It would turn out, however, that comes in a different size or else that its productivity and capacity are below those of imports.. We then go to the manufacturer and ask: "Could you make thus and such?" "Yes, we can!" "Let us sign a contract!" Naturally, however, they reply: "Give us materials!" Thus, we needed special pipes for the continuous roasting unit. We found the proper manufacturer but there was no stock. No stock would be available for 1977 and for 1978. We asked the combine's chief mechanic to do the job. However, he cannot do it properly with the present equipment. Such absurdities are frequently encountered as a result of excessive centralization in the allocation of material resources.

Nor is everything in order with the load which our shop must carry. The variety of items which the main units can produce is quite broad. We can produce anything, on a high-quality basis. But here is the question: Is it profitable for our shop to produce some varieties of rolled metal? Production conditions are entirely different when it comes to manufacturing automobile steel, blade steel, kinescope steel or printing press bands. The result, therefore, is that we spend four times as much time on the production of 1 ton of kinescopic steel than for other types on the five-roll mill. Considering our volume of output, which is 2.5 million tons of rolled metal annually, providing that the entire work goes smoothly, the frequent and drastic changes in technology result in major losses. We have more than 1,200 customers and a huge range of technological specifications. However modern a machine may be, it is very difficult to ensure the high quality of items in such large numbers. That is why our output must become more specialized.

The question of the cost of a production process to the combine, the sector and the country is one we must ask ourselves every day, in each specific case.

V.T. Gusev, chief of Glavlipetskstroy:

Today precise calculations are extremely necessary. Let us compare a few figures. In the past 5-year period all planned projects and production capacities were installed at the combine; more than 280,000 square meters of housing, and a large number of sociocultural projects were built; more than 320 million rubles were invested in construction and installation work. However, this is not the highest indicator reached by the construction workers at the Novolipetsk Combine. Some 5-year periods have been substantially better, in the course of which as much as 500 million rubles' worth of work has been completed. We cannot fail to be concerned by the fact that, with every passing year, we are lowering the volume of output at the NLMK, thus dispersing a united and skilled collective among different construction projects. For the history of the combine's development is also the history of

the establishment of the Lipetskstroy Trust, the experience of which in keeping cadres and developing a stable labor collective was approved by the CPSU Central Committee.

In discussing the combine's problems relative to scientific and technical progress, we must mention the "2500" mill. Once again, for who knows how many times, we have included in our plans elements of rushing and errors at the finishing stage. The first half of this year is coming to an end and so far nothing has been planned for the next one. To this day all we have are promises. We are still only imagining that by 1990 we shall complete the first part of a one-of-a-kind mill and reach the necessary quality of metal sheets. Why do we act as though we are doing everything possible to anticipate hasty work? Give us the 5-7 million rubles which we need for the next year and the construction workers will be able to undertake the building of the mill on the basis of high technical and organizational standards, making use of the rich experience gained in the construction of projects of high unit capacity, and supply an even load of work to the installation organizations. At that point we could guarantee that by the final year of the 5-year period the first section of the "2500" mill will be completed without haste or nervous stress.

I believe that the extremely centralized and extremely unsatisfactory nature of material and technical procurements, in addition to planning faults, is the main hindrance to capital construction, including that being done at the NLMK. Do not misunderstand me, we are not in favor of taking from the state an unlimited amount of resources and using them unskillfully. The only thing we ask is to be given the resources we need, to be supplied with the necessary variety of items on a rhythmical basis. Unfortunately, the procurement methods used by the USSR Gosnab force us to apply a quite imperfect technology in organizing construction output. The impression is created that the Gosnab is concerned above all with increasing turnover and, as far as procurement workers are concerned, the more resources they provide the better. In designing buildings and equipment, the designers draw up the most economical shapes of items, the number of which may reach 150; on the basis of the existing procurement system, however, the Gosnab provides us with 30 to 40 varieties only. Naturally, we are forced to make inefficient use of the metal, for we cannot stop the production process by waiting for parts with proper dimensions, as stipulated by the design. We build with what we have on hand. Naturally, this is tremendously costly. We are overspending governmental resources. Once and for all, order must be brought into the procurement area and a limit set to "planned" waste.

N.P. Lyakishev, director of the Central Scientific Research Ferrous Metal Institute, USSR Academy of Sciences corresponding member:

Scientific and technical progress means, above all, the extent to which science participates in material production. If we were to assess the scientific and technical level reached by our ferrous metallurgy on this basis, we could clearly say that it is quite high. I am not basing this judgment on domestic publications, for this has been written up by foreign periodicals as well. In particular, Japanese specialists describe our sector as an excellent research laboratory. Unquestionably, this is flattering.

However, such compliments should not conceal the major faults in our work. We are substantially behind world standards in a number of indicators. What are the reasons for this situation? They have been known quite well and for quite some time: scientific developments of theoretical and practical problems are quite fast and, as a rule, yield substantial results. However, with rare exceptions, the stage of application becomes the stumbling block for the ideas and enthusiasm of the creators of new equipment and technologies. The pace of application depends on the organization of this process on the level of the sector and the individual enterprise. So far, this problem has not been economically solved in both cases. We are sluggishly applying even processes which have proved to be fully justified. The most convincing example of this is the application of systems for continuous steel smelting.

As we know, this Soviet development was applied for the first time in our country and not abroad. Today, however, in terms of its scale of application we have fallen substantially behind Japan and other countries. Why is this? We cannot fail to note the efficiency of the system of continuous casting. Awareness does not lead to action, however.... No single metallurgical plant can install a continuous steel casting system without centralized aid. Here as well centralized capital investments are needed. However, in all such cases the current system of priorities has been brought into action.

The procedure of planning "from the base," on the basis of the level reached, called for increasing steel production by 15 to 20 million tons each 5-year period. All investments were based on solving this problem. This meant fewer capital investments but also less efficient traditional steel smelting methods. Understandably, with such an approach finding means for the application of basic technological novelties becomes practically impossible.

In terms of technical features, the Novolipetsk Metallurgical Combine is one of the best in the world. However, all of the enterprise's successes in this area were not achieved on the basis of solid organizational and economic foundations but as a result of the activities of subjective factors, of individuals, if you wish. Actually, a truly innovative collective developed here a long time ago, headed by committed, and questing people. But give to that same Belyanskiy, whom I have known for many years and whom I consider an outstanding shop chief, and to his comrades the necessary economic levers and we would probably see not individual, although outstanding, leaps in standards, but a steady and powerful growth along the entire front of scientific and technical progress.

I believe that the time has absolutely come to reorganize relations between science and production. Currently the sector has 34 scientific research institutes employing approximately 10,000 highly skilled scientific workers. This is quite a force! How can we make it work to meet the concerns and needs of the plants? I believe that the road to this objective runs not only through the creation of scientific-production associations. In my view, we must more daringly undertake the establishment of comprehensive collectives, consisting of scientists and production workers, engaged in solving specific creative problems. However, whereas in science this method is currently being extensively applied, the plant personnel are still not in a hurry to apply the program-target method of planning and stimulating scientific and technical

creativity. I am confident that at this time we must most persistently try a great variety of methods for integrating science with production.

I believe that we must develop as rapidly as possible and apply in management practice radical measures to ensure economic responsibility for purchases of imported equipment. The following happens frequently: instead of energetically developing a specific promising trend of scientific and technical progress, the existing technological gap is filled by purchasing abroad a machine, which, furthermore, may not be the best. Clearly, the solution of this problem directly depends on broadening the rights of enterprises and increasing their real responsibility for end production results. As we know, they can be made truly responsible only for things they can actually influence. This is an axiom of the science of management, which we frequently neglect.

Let me say a few words on production quality as a sectorial problem. Reducing the metal-intensiveness of the national income by nearly one-half is planned for the year 2000. This level can be reached both by increasing the quality of the metal and broadening its variety, and by making more efficient use of the metal by the consumer. A tremendous amount of work must be done by the metallurgical workers. Meanwhile, the consumer, who is profoundly interested in the results of such work, is still quite poorly encouraging our efforts. For example, the Oskolskiy Electrometallurgical Combine, is manufacturing with the help of a progressive technology, metal with features which offer new consumer advantages. This circumstance, however, has not been reflected in standards or wholesale prices. The result if the following: the quality of the metal is new but the price is unchanged. Is this proper? I believe that today we have come close to a level at which each step must be thoroughly considered economically and the price of commodities must be precisely consistent with the socially necessary production outlays and with the benefits to the consumer.

Yu.D. Zhelezov, rector of the Lipetsk Polytechnical Institute, doctor of technical sciences:

Obviously, every year, as we assign our graduates to the combine, we are dealing with the purely quantitative aspect of the problem. It would be sensible to consider the situation with the quality of specialist training. This is where the most crucial problems reside. The main one is that the time has come to change the very nature of relations with our base enterprise and to strengthen efficient economic incentives characteristic of their good comradeship. What does this mean?

We hope that within the shortest possible time the VUZ will be able to structure its work on the basis of direct requests by the combine for the type of specialists it needs. What is the current situation? The plant hires our graduates without any precise needs, "to no purpose." Under such circumstances, the quality of their training is ignored. Had the enterprise paid the state for the specialists assigned to it, its requirements toward us would have been entirely different. Today we are amazed by the fact that almost 1,000 employees with higher education are employed at the plant as workers. I believe that this number indicates major faults in the existing

system of placing VUZ graduates and their wages. Hundreds of engineers is not employed according to their training. Meanwhile, we keep sending to the combine 150 to 200 engineers every year. What is this if not a waste of social labor?

Another very important question arises in the activities of the higher school. Demand for specialists in one area or another changes with the development of the production process and the acceleration of scientific and technical progress. The question is the following: Is it expedient, under these circumstances, every time to train for period of 5 years specialists which are needed today? Would it not be simpler to develop a material incentive system which would encourage engineers to improve their skills or change them as required by the production process? It is much less expensive to retrain a specialist with higher education than to train a new one. Furthermore, this would not require opening new departments and offering new courses every time.

Another most important task for us is to develop research jointly with the combine. Our institute employs 233 candidates and seven doctors of sciences. What have they accomplished? The general opinion is that the efforts to improve the technology of the agglomerate, the use of iron slag and the mastery of the "2000" mill were quite effective. Under the conditions of a steadily updated production process we have tried to train specialists for the new shops and sectors on a specific basis, even before the facilities were started up. While the "2000" mill was under construction, our students were undergoing their training directly at the construction site. As the oxygen converter shop No 2 was being built, practical training took place in the course of the installation and tune-up of the systems. This has become the rule, although, unfortunately, exceptions still exist. This pertains, above all, to skills related to servicing computers. The reason? The poor link between the higher school and the production process, and the lack of an economic mechanism governing supply and demand in training skilled cadres.

In order to ensure the timely retraining of engineers, the institute's scientists read special lectures in the cold and hot-rolling shops, thus helping the plant engineers to fill to a certain extent the gap in their theoretical knowledge. The main trend in the retraining of graduate specialists, in our view, is their practical participation in projects, together with institute scientists, aimed at the creation of new technologies and actively influencing the quality of output and the acceleration of scientific and technical progress. At this point, however, we come across phenomena which, alas, have become typical of our economy.

Let us consider steel evacuation technology. This most promising innovation, jointly developed by VUZ scientists and combine engineers, has been undergoing application for some 10 years. Electrolytic metal processing is being applied even more sluggishly. Yet these two types of metal processing solve the problem of meeting stable technical specifications for automobile, kinescope and printing press steel.

The quality of air heaters was criticized at the beginning our discussion. Yet, a progressive development needed in the production process has been waiting application for the past 12 years. The fault lies in the major

defects in the mechanism for the conversion of scientific ideas to practical production. The recently published CPSU Central Committee draft "Basic Directions in the Higher and Secondary Specialized Education in the Country" specifically mentions the fuller utilization of the scientific potential of higher schools. Our institute in Lipetsk is a very big scientific institution. We have skilled cadres and proper experience. The institute's scientists do 1.5 million rubles' worth of research and applied projects annually. It is hurtful, however, to realize that they work at approximately 40 percent below capacity. The main reason is the organizational separation between the institute and the combine, although everyone speaks of close cooperation between them.

In many respects the Novolipetsk Combine is a unique ferrous metallurgy enterprise in the world, specializing in metal sheet production. It is entirely ready to become a powerful scientific-production association. The scientists of the Lipetsk Polytechnical Institute have been submitting this problem to superior organizations for a number of years. Production specialization, combined with high degree of automation and the joint efforts of the combat capable scientific research subunits of the combine and our institute's departments would enable us to give our economy a qualitatively new type of collective. It could also include subunits of all-union scientific research institutes located in our oblast. I am confident that such a consolidation would yield a much more significant creative accomplishments by scientists and production workers compared with the present, and would substantially influence the accelerated pace of scientific and technical progress.

[Editorial Note] As we can see, many worrisome features may be found in the superficially quite favorably painted picture of scientific and technical progress at the combine. The metallurgical workers themselves and all other participants in the meeting unanimously noted the main problems facing the collective: the great disparity among indicators of technical facilities, and the growing gap between equipment supplied with modern computers, on the one hand, and primitive and obsolete tools used by workers in many basic skills, on the other.

The participants in the discussion also agreed that scientific and technical progress is, for the time being, an important matter for the NLMK although not primary from the economic viewpoint. The subjective factor remains the main promoter in the development and application of scientific and technical achievements: individual initiative, the level of relations developed between a production unit and a scientific organization, etc. In the interest of the matter, we must more rapidly make practical use of economic standards, which would powerfully provide every production worker and scientist a behavioral model consistent with the maximal acceleration of scientific and technical progress.

Radical renovation of basic productive capital, reducing the scale of new construction and ensuring the more intensive utilization of modern equipment is the path earmarked in the party's decisions, which will make it possible to reach high rates of scientific and technical progress and release considerable capital investments which would accelerate the development of the social area.

As was noted at the June 1986 CPSU Central Committee Plenum, it is a question of possibilities of tremendous national economic scale, which may be found by following the main trends of the party's contemporary economic policy. Progressive scientific thinking, and new equipment and technology must serve socialist society and every Soviet person to their utmost capacity. This precisely is the most important meaning of reorganization in the management of scientific and technical progress.

'Human Ecology'

M.V. Krutskikh, crane operator, blast-furnace shop No 1:

On behalf of all women, as a mother and a worker, let me say, above all, that we want peace, we want to work conscientiously and well under peaceful skies. I believe that the reorganization discussed in our round-table meeting, a reorganization which has been undertaken throughout the country, will help to strengthen the positions of socialism and peace.

By implementing the resolutions of the 27th CPSU Congress, the combine's collective is doing a great deal to ease working conditions and to upgrade labor productivity and improve the practical and moral atmosphere in each shop and at each work place. I am pleased that in my section, the bucket cleaning depot, today there are no more violators of labor discipline. There are no drunks and the people are working with great upsurge. Today it is pleasant to complete or start a shift, when we see that the people are truly interested in something. In our brigade, we have frequently talked of the reason for which such pleasing changes have taken place. We have reached the view that the people have properly understood the party's appeal and have responded to it. The worker's conscience was awakened in those in which it was previously slumbering. The main reason for this is that, in my view, no controllers would be of any help if we behave irresponsibly toward our obligations.

I use this opportunity to address myself to the heads of the enterprise and our ministry with the following request: our shop has a warehouse for cold pig iron. It has eight magnetic cranes. The work of the crane operators is very stressed throughout the shift and, sometimes, they cannot even take a lunch break. Yet the cabin and the crane itself are uncomfortable. Would it not be possible to install on such cranes the type of cabins which would be consistent with modern requirements, i.e., would be supplied with air conditioners, provide good visibility and have a comfortable seat? This determines not only the mood of the person but also his work capability and health. Healthy people are the wealth of the country. The section I am referring to employs essentially young men and women who have come from vocational technical schools. I am certain that if the question of the cabins is solved labor productivity will increase and cadre turnover decline.

V.P. Kosyakov:

In our view, the USSR Ministry of Ferrous Metallurgy has ignored the recently very popular call to "shift manual labor to a machine." No real changes have been noticed even after the party congress. Out-of-town assignments make me believe that the work of blast-furnace operators should be substantially

facilitated at all blast furnaces in the country. So far the main working tools here remain the crowbar, the pick, the sledge hammer and the shovel. The sledge hammer which, at our temperature refuses to work, obviously needs a rest. But even such sledge hammers are in short supply, not only in our combine, but also everywhere else.

Yes, minor mechanization facilities are extremely needed. To this day the pig iron troughs must be lined manually. After completing such an operation the people are exhausted. Three years ago we received experimental systems for dismantling and lining up such troughs. They turned out to be absolutely worthless, and a few days later this "equipment" became scrap iron. In other countries such problems have been solved successfully.

At the batch-feeding area, the people choke up from the dust in summer and freeze in winter. Naturally, no acceleration whatsoever would be possible here. The equipment we use is very old. The machine builders should be concerned with developing new equipment, which would ease the work of blast-furnace attendants.

A great deal remains to be done to improve living conditions for the workers. The housing problem is extremely grave. In our shop some 600 people are waiting their turn for housing. Workers wait 15 to 16 years for an apartment. Our people earn well. In our brigade alone some 18 to 20 people would willingly become members of a housing cooperative for the sake of obtaining a long awaited apartment sooner. However, cooperative construction in the town is poorly developed.

The transportation problem is also being poorly solved. Street car Depot No 2 was completed and the number of trolley buses was increased. However, such transportation is unreliable. In the morning, during the peak hours rows of streetcars and trolley buses idle, while people, cursing all over the place, are storming the buses, afraid of being late for work. Meanwhile, dozens of official chartered busses travel empty, passing by the crowds of people at bus stops. Despite extensive discussions of this problem at meetings of the aktiv, the problem remains unsolved. In other cities official buses have been used for some time to assist public transportation at peak hours.

But in our own combine as well a great deal more remains to be done. For example, real order must be established in the use of amenities, and not in our shop alone. Here is what happens now: you go and take a shower after the end of the shift and there is no cold water. Naturally, after having worked in the heat of the furnace it is not particularly pleasant to take a shower with boiling water. It would be pleasant to walk down the main alley bordered by plants. But this also should apply shop territories which, like ours, are in outlying areas. Greater concern should be shown for them. They must have more greenery. In the summer the roads should be regularly sprayed and in winter cleared of snow just as conscientiously. In this case the worker collectives themselves could substantially help our shop in improving amenities. This must be done. Trade and all consumer services as the combine should be streamlined. We have a store, Yubileynyy, at the entrance gate. It is a good store and people patronize it with pleasure. There should be at least one such Yubileynyy per shop. In my view, acceleration means that no

one and nothing would hinder us to advance calmly and confidently. I am confident that the majority of my comrades are ready for such acceleration. Now it is up to the administration to act.

S.I. Verigin, combine trade union committee chairman:

The round-table participants, I believe, have been able to see for themselves that production is successfully developing in our enterprise on a new technological basis. At the same time, the social infrastructure is growing quite confidently. However, I would like to speak not of successes but of the problems encountered by the combine and, probably, by other enterprises.

What does a person need? Above all, I would assume, good housing. During the previous 5-year period the combine increased the amount of housing construction. We averaged about 60,000 square meters annually. Sociocultural projects were actively completed as well. Here I disagree with the thought expressed by the chief of Glavlipetskstroy that the construction workers deserve the entire credit. Many of the projects would have been impossible without the efficient aid of the combine's leadership. I do agree with Comrade Gusev that we should not rely exclusively on the construction workers in solving the housing problem. We must find ways of involving the working people in this project. Otherwise waiting lines for housing will not end.

We must see to it that the people come to us and say: "Give us loans and we shall build our own houses!" The combine is entirely able to issue such loans from its economic incentive funds. Tell me, could be consider normal a situation in which the young person turns to the trade union committee and say that he is married, is expecting a child and needs housing, and for us to answer that we have no housing, put your name down on the waiting list and wait. And then he waits. He waits for years, instead of taking a loan from the combine and building the type of house he likes.

Let us also note that according to the existing procedure, a significant share of the housing built by the combine goes to other organizations. About 450 of each 1,000 apartments it builds are expropriated. This greatly lowers the interest of labor collectives in increasing housing construction.

I fully support the demands formulated by Mariya Vasilyevna Krutskikh toward our machine builders. I believe, however, that this should be a question not only or, rather, not exclusively of improving the design of cabins, although, naturally, this is important, but of relieving women from work in metallurgical production by accelerating scientific and technical progress. Questions of improving working conditions, particularly those of women, and labor mechanization and automation are assuming today prime importance. While being concerned with the acceleration of socioeconomic development, we must, I repeat, always remember that a woman engaged in production work is not only a worker but also a mother, and the custodian of the home.

The Simple Facts:

In 1985 the labor turnover at the combine was 7.8 percent, as against 8.5 percent in 1984. According to sociological surveys, the main reasons for the

drop were improved labor conditions, increased mechanization of manual operations and efforts to reduce pollution with gas and other factors harmful to human health in metallurgical production; the concern of the enterprise's management for housing and the organization of vocational training, recreation and relaxation of the working people intensified substantially. The combine has base technical schools, a house of culture, a sports hall with a swimming pool and an ice skating rink, a ski base, a water treatment station, a track field, a preventive treatment sanatorium and a rest home.

During the 11th 5-year period the combine completed more than 200 major projects at a cost of more than 29 million rubles for the reconstruction of the production process and the improvement of working conditions. The work of more than 6,000 people, including 2,000 women, was made easier. Much work was done to improve amenities for the working people. The collective is fully equipped with public catering enterprises.

In recent years the combine has built and commissioned a hospital complex for 1,150 beds, a polyclinic which can handle 3,000 visits daily, and a preventive treatment sanatorium for 160 people. All of them are equipped with modern medical facilities and staffed with highly skilled personnel.

The health maintenance facilities at the combine are regularly visited by 2,500 people; all in all, more than 23,000 working people regularly engage in physical culture and sports. Particular concern is paid to the struggle against drunkenness and alcoholism as part of preventive care measures.

In the final year of the 11th 5-Year Plan alone, morbidity at the combine dropped by nearly 7 percent. During the 11th 5-year period, compared with the 10th, the number of cases of vocational illness declined by more than one-half. Female morbidity at the enterprise is the lowest in the RSFSR. The practical experience of the party and trade union organizations and economic managers at the Novolipetsk Metallurgical Combine in protecting the health of the working people was recently approved by the CPSU Central Committee.

During the past 5-year period about 5,000 families of metallurgical workers improved their housing conditions and 1,640 children were placed in kindergartens and nurseries. The housing problem, however, remains the most urgent at the enterprise.

In accordance with the comprehensive plan for socioeconomic development of sectorial enterprises, during the 12th 5-year period 13 polyclinics, 16 hospitals, two medical-hygiene units, 37 preventive treatment sanatoriums, 41 pioneer camps and three boarding houses for labor veterans will be commissioned.

V.V. Muratov, combine medical unit chief physician:

In order to ensure the real acceleration of the country's socioeconomic development, in my view, the management and organization of the work and all activities of health care authorities and institutions must be decisively restructured. Above all, we must upgrade the skill of the medical personnel, work discipline and organization; we must enhance the responsibility and

interest of everyone in improving end work results. However, the current system for upgrading the skill of physicians and nurses and their wage system, which is not based on work quality, pertaining to the establishment as a whole and the individual employee, do not contribute to this. Each 5 years the wages of physicians and nurses are raised, whether or not they carry out their obligations more knowledgeably or better. Why not set up a procedure for the mandatory certification of all specialists once every 5 years?

It is not secret that a medical worker, dismissed for moral or practical reasons from a medical institution, as a rule soon finds the same position elsewhere, at the same salary. Should we not consider that a specialist guilty of a severe violation of our morality or of the medical oath, should be deprived of the right to practice for a period of time?

The current regulation on the personnel of disease prevention establishments are inconsistent with current requirements. They were issued a long time ago and do not take into consideration the changed nature of health care work, including the work of medical hygiene units at large industrial enterprises.

Today we speak of giving priority to workers directly at enterprises and of converting to universal outpatient treatment. Meanwhile, positions for specialists (stomatologists, neuropathologists, ophthalmologists, etc.) remain based on the territorial principle which, in the case of industrial enterprises, amounts for 0.25 slots per 1,000 workers. As a result, the medical-sanitary unit of a combine which employs tens of thousands of people, has 13 slots for such specialists. Nevertheless, our polyclinic must remain open from 8 am to 10 pm.

Automated diagnostic, treatment and laboratory complexes using electronic systems and computers, are being increasingly applied in the daily work of health care establishments. Nevertheless, the size of their engineering and technical personnel remains the same. Nor do salaries of such category specialists change. What type of engineer would agree to work in a medical institution for 120 or 130 rubles monthly, when at that same NLMK he could earn significantly more, not taking into consideration bonuses? Because of the low salaries, physicians and, particularly, secondary and junior medical personnel and specialists, the training of which has cost a great deal of money to the state, find jobs in other economic sectors. Already today there are vacancies in all departments of our medical-sanitary unit for secondary and junior personnel. Equal wages for different amounts and varying qualities of services have led to the fact that both registered and practical nurses refuse to work in maternity houses and in the surgical, traumatological and many other wards. For the same reason it is difficult to secure night-duty medical personnel.

The funds allocated to health care institutions for medical apparatus, equipment and instruments, which are becoming increasingly expensive, are obviously insufficient. Physicians and patients have been particularly complaining of late about shortcomings in the availability of drugs in medical institutions, hospitals above all. The standards governing the allocation of funds for such purposes have long fallen behind real needs.

Great attention must be paid to problems of the quality of contemporary diagnostic and other types of medical equipment that are being produced. As much as 50 percent of such equipment requires repairs immediately after it has been installed and assembled. The result is that the equipment has been purchased, the funds for installation and assembling have been spent but no improvements have been made in medical institution facilities.

Requests for medical equipment must be formulated 2 years in advance, according to a list and without information, i.e., without any precise knowledge of the nature of the ordered instrument or its possibilities. Such orders are based simply on the size, on the possibility of placing such an equipment in existing premises. Unfortunately, however, Medtekhnika does not meet more than 40 to 50 percent of even these requests. For some reason, ordinary hemostatic forceps, drill bits, and many other types of the simplest equipment and most basic instruments are in very short supply.

All of this proves that the time has come to draft new standards governing the work of disease prevention and medical establishments, taking mandatorily into consideration not only quantitative but, above all, qualitative characteristics. They must be closely related to the wage system and bonuses for the medical personnel, differentiated in accordance with the amount and quality of their work. In our view, this will enable us to make maximal use of existing possibilities of improving health care activities without resorting to substantial increases in the size of the medical personnel.

A.M. Moskvichev, chief of the Main Administration for Treatment-Preventive Aid, USSR Ministry of Health:

A number of problems have developed in the health care system, the solution of which will unquestionably contribute to improving the quality of medical aid to the population. Production progress and the acceleration of the country's socioeconomic development are most closely related to progress in health care and, therefore, to improving the health of the people. Here is a simple example: a person who does not show up to work for 1 day because of a cold or illness costs the state 200 rubles, which includes the value of nonproduced goods. On a national scale, this amounts to tremendous losses.

As I listened to the speeches of the production workers, I kept thinking of the fact that problems on the solution of which the USSR Ministry of Health is currently working are quite similar to those of the Novolipetsk Combine and other industrial enterprises. The situation in the health care system, whose institutions are budget supported, is characterized by the fact that the rights of the heads of hospitals, polyclinics, and medical-hygiene units are limited; there is virtually no material incentive for workers in this sector. No more than 1.5 percent of savings from the wage fund can be used by the manager to give bonuses. It is only a small number of treatment-prophylactic institutions participating in the experiment that have been provided with somewhat better conditions in this respect. The industrial ministries producing medical equipment are still by no means ensuring the necessary quality consistent with contemporary requirements. All of this hinders the efforts to improve medical services to the population.

A situation has developed in which a section therapist in an urban polyclinic must take care of 1,700 people, while his colleague at an industrial enterprise, 2,000, although the responsibility of the latter is greater. For that reason, the Ministry of Health is planning to make shop sections smaller, to average 1,700 people per physician. We are planning to reduce this number to 1,600 by the end of the 5-year period. We also intend to increase the wages of shop therapists, in order to attract the most skilled specialists at industrial enterprises. Currently a section therapist in an urban polyclinic, with a 7-8-year seniority earns about 200 rubles, whereas his colleague, with precisely the same seniority, working at an industrial enterprise, earns less.

Today the combine faces in its entire magnitude the problem of organizing, with the participation of the urban medical establishments, a modern center which would combine recovery treatment and professional rehabilitation of sick workers. As we know, it is easier and less expensive to treat and return to work a skilled worker than to train a new one. Such centers have already been established in the Ukraine, in Gorkiy and in Ufa. What is their nature? The enterprise sets aside a small shop in which people who almost became disabled can work at their previous jobs under somewhat easier conditions. They did not become disabled thanks to the efforts of the rehabilitation establishment. If a person is unable to work at his old job for reasons of health, he is taught a new skill.

The second crucial problem, was the creation of a major diagnostic center in Lipetsk, most likely on the basis of one of the medical institutions in the city. The importance of early and skilled diagnosis in terms of successful treatment is self-evident.

The combine has built a large modern medical-hygiene unit for the needs of the working people. It would be expedient, I believe, to use its facilities for increasing the number of consultations with noted specialists from medical VUZs and scientific research institutes from other cities. This will enable the medical unit physicians to consult with highly skilled specialists on matters of treatment. The USSR Ministry of Health will provide the necessary assistance in this respect.

The combine has done a tremendous amount of work to improve the working, living and recreation conditions of the workers. However, the capacity of the preventive treatment sanatorium, with facilities for no more than 160 people, remains the weak spot. This is obviously insufficient for such a huge collective. Such preventive medicine establishments are adequate for enterprises in which no more than a few thousand people work. If your preventive facilities are greater, you would be able to transfer here from the medical-hygiene unit people who would undergo treatment not requiring hospitalization. Undoubtedly the combine can successfully solve this problem.

V.N. Shirokov, combine chief power worker:

The work of our power personnel involves many problems and many interesting features. We consider environmental protection one of the main areas of activity. In this respect as well the combine holds a leading position in the

sector. The overall water recirculation coefficient here is 92 percent; 67 percent of pollutants are tapped and rendered harmless before being released. The coefficient of utilization of production waste equals 85 percent.

These figures are quite high. Nevertheless, many unsolved problems remain. Not everything is satisfactory with the removal of ammonia salts from sewage water before it is released in the water reservoir. No technically acceptable means for the decomposition of such salts has been developed in the country. Whereas the problem of removing dust from the gas has been virtually solved, the same could hardly be said of removing from it nitrogen oxides, sulfur compounds and small concentrations of carbon oxides.

Science is assigned a primary role in solving such problems. However, quite frequently scientists take the position of marginal observers. The combine makes serious demands on the design institutes, which draw up for use by the shops of shops morally obsolete or untested designs for treatment systems or provide unsuitable technical solutions. As a result, for example, our treatment facility for the removal of calcium carbide at the smelting furnace, which was installed in 1984, is inoperative. We are particularly displeased with the work of Giprokok, our sectorial institute. For quite some time it has been unable to offer a practical solution to even a single problem related to protection from air and water pollution. We are equally displeased with the Ministry of Chemical Industry, which is in no hurry to develop the production of additives, coagulants and other materials, which would enable us to increase the water circulation coefficient without additional capital investments, and thus to conserve a priceless resource: fresh water.

Yu.S. Tsaturov, USSR chief state inspector for the protection of air purity, member of the Goskomgidromet Collegium:

Although many speakers have preceded me, only one of them mentioned environmental protection. Why is that? Today this is the greatest scientific and technical, economic and social problem! Here you are building new shops, applying new technological processes, and helping the country to avoid purchasing abroad items it needs. All of this is good. But where are new wasteless and low-waste technologies? Who is responsible for their application at the combine? Is it exclusively the chief power worker and his deputy who are responsible for environmental protection? Or have all such problems been already solved here? Let me cite a few figures.

The Ministry of Ferrous Metallurgy accounts for 17.5 percent of waste discharged in the atmosphere in the country. It is true that the share of this combine in these discharges is relatively small--no more than 7 percent. How did the ministry and the combine deal with atmospheric protection assignments in the previous 5-year period? Discharges in the atmosphere were reduced for the entire sector by no more than 400,000 tons. Efforts to reduce harmful discharges by the combine are being pursued at an inadequate pace. Yet substantial funds are being spent on purification! Why is this happening? I have still not heard an extensive answer to these questions. As to the Ministry of Ferrous Metallurgy, approximately 40 percent of its dust treatment equipment worked inefficiently or was faulty. It is true that in this combine the situation is much better. Here the level is only half the average for the

sector. Nevertheless, discharges remain huge--more than 750,000 tons of harmful substances released annually. The combine accounts for more than 90 percent of all discharges in the air basin over the city.

To the best of my knowledge, the Ministry of Ferrous Metallurgy intends to reduce such discharges into the atmosphere by 1.7 million tons this 5-year period. This is not bad. This would be four times the volume discharged during the previous 5-year period. It turns out, however, that the planned reduction of discharges in the atmosphere for 1986 will not exceed 280,000 tons. Therefore, the project is being postponed for the end of the 12th 5-year period and its implementation is problematical. The same could be said of the combine. At the present time we cannot confidently say that this 5-year period such discharges will be considerably reduced here.

It is high-time to drop the idea that the money spent on environmental protection is a loss. According to 1980 American specialists' data, the damage caused to the United States annually from atmospheric pollution alone exceeds \$20 billion. Are there any reasons to assume that in our country the harm is lesser?

The Novolipetsk Combine must become the flagship in the struggle for environmental protection. In this area as well a reorganization of the mind is necessary. Labor related to the protection and preservation of the habitat should be considered by society as the most prestigious. It must be encouraged both materially and morally.

It is important to reach a situation in which under no circumstances would a shop or production facility be accepted without modern normally operating treatment systems. This must be considered in the technical reconstruction of old production facilities. Sectorial and academic science must make its contribution to the solution of problems related to environmental protection. The scientists owe a great deal of work to practical workers. It is important to learn how accurately to assess the true dimensions of the damage suffered by society from environmental pollution and determine the actual efficiency of environmental protection measures. The economic incentive for environmental protection work must be increased and the sources for outlays for such purposes must be streamlined. It would be expedient to develop a set of regulations which would govern the work of enterprises by assessing all production outlays and the harm caused to the environment as a result of the work, and to compare such outlays with profits from the marketing of the goods and with the national economic results of their utilization. Such work as well must be accelerated.

Hero of Socialist Labor I.V. Frantsenyuk, combine director, candidate of technical sciences:

Let me tell Yuriy Sarkisovich Tsaturov that we ascribe great importance to problems of improving the protection of nature and the air and water basins. We are investing substantial funds in environmental protection and have a work program in this area for each 5-year period, as stipulated in the plans for capital construction and capital repairs and, finally, the plan for basic production activities. We have achieved some successes in environmental

protection. Let us consider the production of ferroalloys, in which electric furnaces are used. In the past this facility consisted of a separate plant which frequently polluted the air. Today this activity has become invisible. The release of gases into the atmosphere was terminated after we were able to build modern and well-equipped treatment systems. Last year alone we spent 15 million rubles in capital investments for the reconstruction of such equipment in the agglomeration production facility and in building the plants for the first and second agglomeration machines. This is a major accomplishment. Today the work of one-half of the agglomeration factory has become considerably more efficient and cleaner. We have laid a firm foundation, costing some 8 million rubles, for the reconstruction of gas treatment equipment in the first oxygen-converter shop which was previously unpleasant to look at. It used gas treatment equipment purchased from Austria. We found it unsatisfactory and replaced it with more advanced equipment, including some produced domestically. In this area as well, therefore, a great deal has been accomplished to protect the environment and to improve labor conditions through the joint efforts of construction, installation and combine workers. We are persistently working on the development of closed water circulation cycles with their own treatment systems. Briefly, environmental protection is organized here no worse than at other progressive enterprises in the sector or at capitalist enterprises and, in some respects, it is even superior to them. However, we are not satisfied with accomplishments and will continue our efforts in this area.

We are pleased to see that the decisions of the 27th CPSU Congress give priority to the social area. During the previous 5-year period we paid great attention to such problems. An expanded and specific program for social development has been drafted by us for the current 5-year period as well. It has become the law for all combine services and all of its public organizations to be concerned with the health of the working people. To work with the slogan "For a Healthy Way of Life and Efficient Labor!" is an old tradition of this collective, which we intend to intensify.

[Editorial note] What was seen and heard at the combine is an excellent illustration of the current very important and necessary thought concerning the need for and possibility of having a calm and undisturbed ecological balance in the coexistence of man with nature. The strong social policy, which is the most important component for the qualitative renovation of socialist society and the acceleration of its progress, the purpose of which is man, his well-being and all-round and harmonious development, formulated by the party at its 27th Congress, provides a firm ideological, political and material base to this effect.

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## NEW WAY OF THINKING AND WORKING

### VAZ: COMPONENTS OF SUCCESS

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[Article by V. Kalinkin]

[Text] Two years ago many specialists at the Volga Automotive Vehicles Plant began to consider the future of their enterprise with concern. The vehicle they produced was gradually beginning to lose its positions on the world market. The annual pace at which the active part of production assets was being renewed was not solving the crucial problems.

Suggestions, which became the basis of socialist obligations, were expressed during the collective's discussion of the resolutions of the April 1985 CPSU Central Committee Plenum, at which the concept of accelerating the country's socioeconomic development was drafted. It was decided, above all, to reach indicators higher than those stipulated in the 5-year plan. The intention was to reduce the time spent on preparing the basic models, to modernize them, to extend guarantees by 50 percent and to master the production of new vehicle models. The most important item in the pledges was to ensure an increased volume of output through higher labor productivity, while reducing the absolute number of working people.

In their letter to the CPSU Central Committee, the VAZ workers requested that the new items in the pledges be included in the 5-year plan of the association. Under the conditions of the economic experiment, the increased number of planned indicators gave the enterprise additional funds for production development and economic incentive and for building sociocultural projects.

The CPSU Central Committee Politburo approved the AvtoVAZ initiative, which was widely supported by many enterprises throughout the country. The initiative of the Volga people was taken up by hundreds of other labor collectives.

#### Design Potential

The contribution of the association's design service is decisive to the VAZ acceleration. It is precisely here that the basic parameters of the future automobile are established--economy, reliability, comfort and technological

advances. The technical and economic indicators of the entire enterprise depend on the work of designers and their creative thinking.

"Our collective has always set itself the task of creating a passenger car equal to the best world models," plant chief designer G.K. Mirzoyev says. "It is for the sake of this major objective that we steadily increased the pace of design and changes in car models. M.S. Gorbachev gave us the much greater task of becoming the fashion setters in global automobile manufacturing. This is the first time in the history of domestic car manufacturing that such a target has been set. Let me point out that our collective has the proper experience and possibility of meeting it, having already gone through a lengthy period of searching, learning and experimenting."

The chief designer described the main stages of the accomplished work. The most important among them was the daily practical use of an automated design system--the SAPR. Computers came to the aid of the designers. Now computers initially compute the optimal technical and economic features of the car, its assemblies and parts, and perform the labor intensive drafting operations. However, there is an obvious shortage of equipment for such work.

Previously, thousands of hours of engineering work were spent on computing various alternatives and it was not always possible to compute the best variant. For example, in designing the body, the designer, as a rule, tried to ensure its reliability by including unnecessary reserves of strength, which increased the weight and therefore increased fuel consumption.

The use of computers made it possible to find the optimal choices within a short time and drastically to reduce the number of subsequent redesigning and testing. Thus, designing time for the prototype of the VAZ-111 "OKA" economy car was reduced greatly.

It was traditionally held that technological preparations for manufacturing begin after the completion of the design. At the VAZ most operations were carried out on a virtually parallel basis.

Although a great deal has been accomplished, most of the work lies ahead. The VAZ people requested of the USSR Council of Ministers the creation of a scientific and technical center at the association, which would include a research base: the aerodynamic and design complexes, the design research unit, the road testing service and some other projects, and industrial experimentation. This would make it possible to design and test in the immediate future a new basic model and two model modifications per year. Only a few of the largest foreign companies can match this.

The VAZ people ascribe great importance in their plans to increasing the output of design cadres through the better utilization of their creative potential. Starting with June 1986, the chief designer's administration has added a new bonus stipulation. Now it is only part of the bonus of engineering technical personnel which is paid in terms of percentage of salary, based on the overall indicators reached by the administration. Another share is left at the disposal of the department chief for individual bonuses to distinguished workers. A manager can give a bonus to an employee

who has worked most efficiently, equal to several salaries, or give nothing to someone who has barely met his assignment. Part of the bonus fund may be kept for the following year. The level of additional bonuses will now characterize the creative yield of the individual worker and be used as a criterion in his service promotions.

A different organization of the work will be required to make acceleration possible. For example, the current processing of design documentation at the stage of coordination and preparation for production will have to be changed. This procedure, involving the participation of about 20 production facilities and administrations, took as much as 3 or more months.

The experience gained in the use of an automated design system and the new labor incentive and organization methods are of great interest not only to automobile manufacturers but also to many collectives engaged in the development of a great variety of items.

The most important trend followed by the design service at the association is the search for and use of the most advanced materials and complementing items. For example, the number of parts made of plastics and metal ceramics, which require virtually no labor-intensive machining, has been significantly increased in the manufacturing of the VAZ-2108 model. This is a prerequisite for the successful implementation of obligations, such as increasing the volume of output without additionally increasing the number of workers and reducing material intensiveness.

The materials used in the manufacturing of the automobile are supplied to the association by hundreds of procurement enterprises from virtually all industrial sectors. The plant technological lines extend farther and farther among related enterprises. This requires a radical change of relations among partners in such cooperation.

Current relations between VAZ partners are totally unsatisfactory. The Ministry of Chemical Industry enterprises are failing to meet deliveries of plastic items and many other materials, for which reason a great deal of items have to be imported. A similar situation prevails with the enterprises of the USSR Ministry of Chemical and Petroleum Machine Building, which provide industrial rubber items, and the USSR Ministry of Construction Materials Industry, which are delaying the production of glass items meeting modern technical specifications.

As was noted at the June 1986 CPSU Central Committee Plenum, supplying machine builders with high quality advanced materials requires the additional development of the capacities of related enterprises.

"The implementation of this party instruction," the chief designer said, "will further accelerate the work of the VAZ. The development of output by related enterprises will also be helped by the fact that now the AvtoVAZ will be able to use some of its foreign currency allocations to purchase equipment for its cooperating partners. I believe, however, that another aspect of this problem is equally important. The pace of updating the new car models is increasing with every passing year but the related enterprises are not prepared for this."

They are constantly violating deadlines for installing capacities and mastering new complementing items and materials. We must contemplate and apply the type of material incentive system and, perhaps, even take legal steps which would motivate our partners steadily to update their output. We must attempt, as of now, to broaden the limits of the experiment and extend it to related enterprises. Relations between the head enterprise and its partners should be well organized. This is a major national economic task."

Today managers and specialists show the same great interest and responsibility toward the problems of their partners as toward their own. Representatives of the association frequently visit related enterprises. Occasionally brigades of specialists, equipment, instruments, and fittings are sent to them and they receive substantial assistance in mastering the production of new items.

In his meeting with the working people of Togliatti, M.S. Gorbachev said: "Proper attention must be paid to related enterprises. We must help and interact with them." In implementing this instruction, the association's party committee has recommended to production facilities and shops to establish individual direct contacts with worker brigades at partner enterprises and to improve competition among related enterprises.

#### Rhythm and Quality

The main conveyer belt of the VAZ begins its 2-kilometer-long path at the body-assembly production facility. It is here that the body appears first. As the future automobile advances, it acquires ever new complementing items, parts and assemblies: electric systems, doors, windows, shafts, wheels, the engine, and headlights. At this point the now ready automobile is silently (no horn is blown) taken out for road testing.

For a number of years the speed of the main conveyer belt remained unchanged--4.7 meters per minute. The speed parameter is based on a number of factors of technical, economic, social and psychological order.

Auxiliary conveyer belts supply the complementing assemblies and parts on a sequential and synchronized basis. Computers ensure thousands and thousands of coordinated actions per minute. Should the conveyer belt suddenly stop its smooth advance, an explanation for the reasons of the stoppage appears on the display screen of the main dispatcher's room. As of that point the countdown begins, measured in seconds. Technological stops per shift are strictly limited, not to exceed more than 30 minutes.

The rhythm of the main conveyer belt is the most important accomplishment of the VAZ. This rhythm was developed by the entire plant collective. The system of labor organization and incentive applied in the main production facility greatly contributed to this. It is substantially different from the one applied at other enterprises. Thus, all engineering and management services have been removed from the VAZ shops. They are concentrated in item-specialized production facilities. This has made their work more efficient and enabled the line shop personnel to concentrate on ensuring the rhythmical implementation of production plans and to upgrade production quality.

Interesting experience has been acquired by the VAZ in improving brigade forms of labor organization and incentive. For a long time it has practiced the planning of standardized assignments on the basis of end labor results. Within the brigade the mastery of related skills is encouraged. This not only helps to maintain the required productivity for the entire shift but also contributes to the development of feelings of collectivism and increased responsibility for end results. It also solves an important social problem, for the harmful effect of conveyer belt monotonous labor is eliminated.

The brigades do not use piece-rate tariffs but a procedure according to which no bonuses are awarded for exceeding the norm. One is asked to do precisely what is planned. Earnings are computed not on the basis of the grade assigned to the project but that of the worker. In order to ensure wage differentiations, based on the worker's skill and his attitude to the work, wage supplements are paid for professional skill and bonuses are awarded for reducing labor intensiveness.

This system constantly guides the worker toward upgrading labor productivity. It is no accident, therefore, that VAZ labor productivity is roughly double that of other automobile manufacturing enterprises. Let us note that during the time for reaching planned capacity, labor intensiveness, productivity and production costs at the Volga Automotive Vehicles Plant was nearly half that at other sectorial enterprises. Ever since it was opened, the enterprise has had virtually no underfulfillment of shift, daily or quarterly plans.

Until recently, the share of VAZ Emblem of Quality output was the highest in the sector. Last year, this title was lost for a number of car models because of stricter requirements. Under the conditions of the experiment and self-financing, however, it is particularly important, for the Emblem of Quality leads to price increases and plant profits totaling millions of rubles.

The primary objective of the VAZ personnel is to regain its lost positions. This year's plant obligations call for submitting for certification four of the most mass produced models by October, together with the latest basic model--the VAZ-2108 ("the Eight"). This should coincide with a noted event--the 10th million Volga automobile which will come off the conveyer belt. By then the plant's certification of the quality of semifinished items, parts, assemblies and technological processes needed in the production of the "Eight" will have been completed.

Today upgrading production and work quality at the VAZ becomes the main feature in the development and implementation of 5-year and annual plans, an object of constant attention and the main factor in assessing the activities of all subdivisions, as demanded by the CPSU Central Committee and USSR Council of Ministers decree "On Measures for Radically Upgrading Production Quality."

The concept of quality is quite broad. In speaking of the work being done at the plant in this area, let us point out above all the new technological processes and equipment which have been applied at all production facilities in recent years.

An entire range of highly automated horizontal forging machines has been installed in the body shops. Powder metallurgy, and cold-die stamping have been developed further. Automation based on robots and computers has been developed at the aluminum casting complex.

The collective of the machine-assembly shop has solved major problems and receives very few complaints. The high quality of its goods is ensured above all by the installation of new automatic assembly lines, including some equipped with active control and diagnostical systems.

In particular, the high-efficiency assembling equipment used solved the problem of providing consumers with camshafts, which were in very short supply. Their quality has been substantially improved.

Today manual labor in the welding shops of the body assembly production facility has been replaced by flexible automated lines and robots. Here the level of automation has reached 96 percent. As a rule, wherever automated equipment has been installed, precision and quality have improved.

This applies to the welding robots. They do not allow even the slightest defects. They have become not only tireless and conscientious welders but also the most exigent and uncompromising controllers. The use of robots has improved the quality of semifinished items.

In order to ensure substantial updating of produced automobiles and equipment on a higher qualitative and technical basis, the plant needed its own machine building facility. Today the VAZ can make even the most complex equipment, including automated assembly lines, processing centers and robot engineering sets. The plant has developed its own production of electronic systems used in machine-tool making.

The development of small-series shops became an essentially new project. Such shops may be found today in all basic production facilities. They use the best high-efficiency equipment, including ChPU-equipped machine tools and processing centers. This enables the plant efficiently to manufacture experimental batches of parts and assemblies and models subjected to comprehensive testing. An equally important fact is that this enables it to develop designs for future car models thoroughly and within a short time, promptly eliminating most faults which inevitably appear in mass assembly-line production of automobiles. Thanks to such shops the plant has been able to organize a continuing updating process.

The most decisive factor at the present stage, which led to drastic improvements in the quality of the Volga car, is the human factor. The association's party committee, which discussed problems of upgrading production quality, also formulated the main solution of the problem: increased exigency and responsibility and strengthened party influence at crucial production sectors. The decision of the association's party committee was accepted by the party members as a manual for action. It was necessary, above all, to strengthen the vanguard role of the party members. A number of party members were assigned to the lagging production sectors.

In implementing the decisions of the party committee, regulations governing bonuses to workers and engineering and technical personnel for quality of output were drafted in many production facilities of the association. The new conditions linked more firmly material incentives to specific labor results.

#### Anti-Cost Mechanism

The purpose of the self-financing system is to ensure the optimal combination of enterprise centralism with autonomy. Enterprise rights have been significantly increased, which enables the labor collective to handle financial resources with a view to concentrating efforts and funds on areas which ensure faster socioeconomic development.

The AvtoVAZ Association converted to self-financing in 1985. This called for a radical restructuring of economic activities and a decisive break with customary concepts. It upgraded individual responsibility for the end labor results of the entire collective. Under the new conditions, the VAZ personnel have focused their main efforts on increasing net income from the marketing of high-quality items. As we know, this is the most important source of state budget and enterprise revenue.

Standards governing the distribution of profits were set. The state budget receives 47.5 percent; the Ministry of Automotive Industry 5 percent and the enterprise 47.5 percent. It is precisely this part of the profit that now AvtoVAZ can use to meet its socioeconomic needs.

Previously, the funds used for production development, wages and economic incentive were assigned by the Ministry of Automotive Industry. The real needs of the association were not always taken fully into consideration; ceilings were frequently set with delays and aspects of their utilization were rigidly regulated. Today these funds are earned by the enterprise itself.

Under the new conditions, it has become economically more profitable for the collective to adopt and intensive plan. The fulfillment of increased obligations allows the AvtoVAZ collective substantially to increase its production development and economic incentive funds, for under the conditions of the experiment the implementation of obligations which ensure increased enterprise profits now entails not only moral but material incentives as well.

Let us take the production development fund. In the past it was distributed for specific purposes among dozens of areas and the enterprise had no right to modify expenditures without the agreement of the ministry. Now the association has a single production development fund based on its profits.

For example, the collective's 12th 5-Year Plan assignments called for almost doubling the amount of its own machine-tool building activities. The enterprise used for this purpose additional funds borrowed from the production development fund. As a result 50 percent more funds compared with the initial assessments were invested.

The development of its own machine-tool building industry enabled the enterprise to produce technological equipment for the manufacturing of the OKA

automobile. Let us emphasize that the production of this model was initially not contemplated for the 12th 5-year period. However, it became possible through the initiative of the association's collective as it began working under self-financing conditions.

The current economic management mechanism enables the VAZ personnel significantly to shorten the time needed for developing and undertaking the production of new car models. This will be accomplished not only by expanding production facilities and using progressive types of technological equipment but also by simplifying the mechanism for the use of financial resources.

Previously this mechanism involved numerous coordinating activities with different institutions. The following typical situation comes to mind: about 2 years had to pass from the time the new car model, the VAZ-2105, was developed to the time when the association was allowed to use the allocated funds and undertake the practical implementation of its plan. This was no exception. The same occurred in undertaking the production of the VAZ-2106, 2107 and 2108 models. A great deal of time was spent in processing and coordinating the main areas of expenditures. These areas numbered in the hundreds and all of them were subject to coordination. The very process of fund allocations was lengthy. Initially, proceeds from sales of VAZ cars were deposited in the Togliatti branch of the Gosbank. The enterprise's profit was then transferred to the budget account, i.e., it was sent to Moscow. Later the specified amount was once again returned to the association's account in Togliatti. This took months.

Today the situation is radically different. The association no longer needs such complex coordinating before undertaking the manufacturing of a new model. Funds no longer make such "trips." After shipping out the cars to the consumers, some of the funds which have been deposited in the enterprise's bank account in Togliatti can be used immediately by the enterprise as it wishes. This takes a few days instead of 2 years.

The development of the social area is being substantially accelerated under the new circumstances. The enterprise has the possibility more flexibly to use its sociocultural measures fund, which has been substantially increased this 5-year period. This will enable it to build additional housing, kindergartens, schools and polyclinics, to complete the building of the palace of culture and the sports complex and significantly to improve consumer services to the population. The main stumbling stone in solving such problems is the weakness of the construction base and manpower shortages. This is what makes so valuable the experience of the VAZ workers who have pledged to work no less than 4 free days at building social projects.

The first half year of the new 5-year period has ended. Has the collective been able entirely to compensate for outlays as a result of its intensive work and earn additional profits for above-plan financial resources? Here is the answer of A.I. Yasinskiy, association director in charge of economic affairs:

"The initial result of the work are encouraging. The enterprise is fully ensuring the necessary financial resources it needs for expanded reproduction. The plan for the first half of the year was fulfilled for all technical and

economic indicators; 3,200 cars were produced above the plan. Machine-tool building increased by 12 percent. The plan for the delivery of new equipment for assembling has been overfulfilled by almost 50 percent. Above plan profits have been earned. The enterprise has crossed an important threshold: it has begun to work with reduced industrial-production personnel.

"In the past the same talk dominated all of our production conferences: 'We are short of people. We are short of skilled workers. Give us higher personnel ceilings.' The number of workers at the association kept growing. Today we are confidently increasing the volumes of output, reducing the number of workers and hearing no complaints of manpower shortages. 'All of the sudden' the number of people has become adequate. This is the direct result of the experiment--the effect of standards governing the formation of economic incentive funds."

Still, the director in charge of economic affairs pointed out that fulfilling the pledge of reducing the number of workers was by no means simple. This 5-year period new capacities will be installed. Several thousand new workers will have to be hired for the production of the OKA car alone. More workers in some production areas and administrations will be compensated by reductions in others. The main source of reductions will be the faster growth of labor productivity because of production mechanization, automation and use of new technologies. This will make the release of some 10,000 people possible.

"Another interesting new feature," Yasinskiy adds, "is this: previously, at the beginning of the year I had no one to work with. All of my assistants would go to Moscow to 'extract' ceilings and indicators. Today everyone is at his job. No reason to go back. We have more time to think how to earn through our own efforts and cunning."

Under the new conditions relations with superior authorities change. During preparations for and implementation of the experiment relations with the ministry, the Gosplan, the Ministry of Finance and other central authorities became businesslike. There was much creating searching and debating.

However, something still remains from the past, when most frequently management methods consisted of petty supervision, orders and restrictions. For example, the Ministry of Automotive Industry continues to issue assignments on lowering administrative-management expenditures, although under the new conditions this indicator makes no sense. The association is still issued plans for overall volumes of output for steel and cast iron in terms of tons, which hinders flexible production management and leads to metal overexpenditures.

Problems which the VAZ people could not even imagine are becoming apparent in the course of the experiment. For example, the indicator of equipment write-offs has become unexpectedly high. The association is installing new automated lines, ChPU machine tools, robots and a great deal of other modern equipment at a faster pace. Technical retooling of the plant is taking place without stopping current production, the pace of which is increasing. The scale of such work is confirmed by the following figure: this 5-year period more than 80 percent of capital investments in the VAZ will be channeled into

reconstruction and technical retooling. Under such circumstances the old equipment must be removed. However, production and shop managers are unaccustomed to such actions. Association outlays for "Amortization Deductions" have been sliding upwards of late, reducing enterprise profits. A regulation was urgently drafted awarding bonuses to managers of shops where old equipment is being removed faster and matters have begun to improve.

"One of the most difficult problems," Yasinskiy admits, "is that of the further intensification of the principles of shop and brigade cost accounting. It is above all a question of further encouraging the conservation of material resources and the struggle against losses and thefts."

The June 1986 CPSU Central Committee Plenum noted that we must more energetically encourage the labor collectives to conserve raw and other materials. It is not normal for bonuses for resource conservation to be estimated literally in terms of kopeks. This criticism applies to the Volga Automobile Plant as well. Until recently, incentives for the conservation of material resources here were extremely small. This particularly applied to metal-intensive production facilities--the metallurgical, press and machine assembly. Bonuses for economy in such production facilities accounted for 0.9-1.8 percent of the overall incentive fund for the acceleration of scientific and technical progress.

The director in charge of economic affairs pointed out that the basic production shops do not have their own services which could organize accounting and norming of material resources. The organization of cost accounting is greatly complicated by the high pace of output and extremely tense relations with related enterprises. Deliveries of many complementing goods are frequently made by air and occasionally haste excludes the possibility of any kind of accounting and even of controlling incoming goods.

The new cost accounting mechanism calls for checking both under conditions of regular work and in emergency situations. By the end of last year, for example, production of the new basic model of the mass produced VAZ-2108 car was undertaken for the first time under conditions of uninterrupted production. The number of stamped parts doubled at the large stamping parts section and the number of readjustments of the presses increased several hundred percent. The people were not ready for this. However, the management of the press department found a solution quickly. A new section (shop) was created, which began to operate on the basis of brigade contracting principles. Its task was not the production of items. Earnings and bonuses in this sector depended on the extent to which the new collective, which worked the third shift only, would be able to prepare the large stamping shop in such a way that the stamping operators would start work in the morning without losing a single minute in setting the presses and looking for materials. The best workers and engineering and technical personnel were recruited for the new section. This difficult problem was solved successfully. The rhythm of the main conveyer belt was not disrupted. Today the association's economists are studying the possibility of applying this experience at other bottlenecks.

Efforts aimed at further improving cost accounting on all plant production levels are extensively being made at the VAZ. Modern warehousing premises are being built wherever needed, at a faster pace. An increased number of scarce and expensive parts and assemblies are subjected to full incoming control and their progress along the entire technological chain is being followed; automated quality accountability and control are being used; increasing use is being made of containers and the responsibility of services and subdivisions for damages suffered by the collective from fines, losses and thefts is being refined. Other steps ensuring the further advancement and strengthening of planned cost accounting are being applied as well.

By implementing the stipulations of the 27th CPSU Congress--installing new equipment, improving the economic mechanism, increasing the growth rates of output and paying increasing attention to social development of the collective--today the VAZ workers are successfully translating the energy of thoughts into that of practical actions. A great deal has already been accomplished and a great deal more remains to be done. VAZ is creating and acquiring new experience. This experience is being steadily enriched as a result of creative searches and the struggle waged by the collective for reaching ever new and higher levels.

M.S. Gorbachev said at the June 1986 CPSU Central Committee Plenum that "the CPSU Central Committee highly rated the initiative of AvtoVAZ and the Sumy Scientific-Production Association, who set as their objective, on the basis of the mobilization of inner resources, to perfect their economic management organization and methods and reach the cutting edge of technical progress, enhance the quality of output and, at the same time, ensure high economic indicators."

Many thousands of labor collectives will find in the experience of the Volga Automotive Plant new reserves for growth and for upgrading production efficiency. This means that, like that of the Sumy Scientific-Production Association, the VAZ experience and the ability to think and work in a new style will be source of further accelerated development of our country's entire national economy.

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5003  
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In My Opinion.... Letters to the Editors

SOLVING A PAINFUL PROBLEM

Moscow KOMMUNIST in Russian No 11, Jul 86 (signed to press 23 Jul 86) pp 42-44

[Letter to the editors by Professor A. Gorelik, laureate of the USSR State Prize, doctor of technical sciences]

[Text] In my opinion, the development and extensive use of a system for technical diagnoses is one of the most important factors in upgrading the efficient utilization of machines and equipment and drastically reducing their running cost. Consequently, it can be considered one of the most important trends in the acceleration of scientific and technical progress.

We know that ensuring the reliability of newly developed machines and mechanisms and their good work and durability are vital in modernizing and radically reconstructing the machine building complex. In our country the annual cost of equipment repairs runs as high as 35 billion rubles. Today millions of workers, using more than one-third of all metal-cutting machine tools, are engaged in such work. If the reliability of the machinery is kept on the present level, as more complex and, naturally, more expensive machines appear in the near future, the repair industry will grow even further.

The problem of upgrading machine reliability has a number of aspects. They include the development of improved design and the creation of new materials possessing the necessary qualities, such as durability, resistance to wear, and stable mechanical, electric and other parameters, within a broad range of different external conditions. Finally, they include perfecting the technology used in the manufacturing of machines and the development and strict observance of the most progressive rules for their use. Therefore, the problem of ensuring the proper reliability of machines remains extremely difficult. Its solution depends on the results of the work of scientists and engineers--physicists, mathematicians, machine engineers, metallurgists, electrical engineers, electronic engineers and material experts--and on the work quality of the production personnel who turn designs into metal, and on maintaining high production standards.

Let us note that at the present level of machine reliability, the cost of ensuring their normal work exceed their initial cost by an average factor of 4-6. For this reason, the current efficiency reached in the utilization of machines can in no way be considered adequate but rather the opposite.

Is there a solution to this situation? Yes. In my opinion, it lies in the extensive use of a system of technical machine diagnosis.

At this point let us diverge from the topic. All of us deeply believe that a medical diagnosis of the state of our health could be quite frequently inaccurate unless the physician uses data of tests, electrocardiograms, fluorograms, X-rays and so on. Meanwhile, however, we run the machines quite calmly, without ways of diagnosing them, unaware of their real condition at any given time or of what to expect in the immediate future. This is despite the fact that systems for technical diagnosis exist worldwide and can provide detailed information. Such information can significantly compensate for any unsatisfactory reliability of machines and thus enable us substantially to upgrade the significance of efficiency criteria of their utilization at the present levels of reliability.

Let us consider this problem, bearing in mind that it is quite specific and essential and that its solution affects technical policy in machine building and the efficient allocation of resources among projects related to upgrading machine reliability and the creation and extensive application of systems for technical diagnosis.

Starting approximately in the 1920s, the so-called planned-preventive repairs began to be comprehensively applied in the operation of equipment. Their periodicity is based on average statistical indicators. However, each specific machine has features different from the average statistical model, for which reason some machines are unnecessarily repaired on a planned basis whereas others break down ahead of the planned repairs. Numerous efforts to find an optimal solution of the problem of determining the periodical nature of repairs have not been particularly successful so far. The mass use of a system of technical diagnosis would enable us to determine the actual condition of each specific machine and repair it whenever this becomes truly necessary. Since such systems can forecast the condition of a machine, such repairs could take place not after the machine has broken down but ahead of time, when a specific defect has reached a certain level.

The use of a system for technical diagnosis would enable us to determine irregularities in a machine on a random basis and, therefore, determine any irregularity with virtually no loss of time. This is exceptionally important, for today the search for irregularities averages up to 50 percent of the total repair time.

The use of a technical diagnosis system also enables us to obtain the fullest possible information needed for the optimal tune-up of machines in use, which will ensure the implementation of a specific operation with the lowest possible utilization of resources. All of this means that with the existing level of reliability of machines and mechanisms, technical diagnosis creates conditions for significantly upgrading the machine utilization coefficient by shortening repair time, noticeably reducing operating costs and eliminating breakdowns. Technical diagnosis systems are highly economical. Computations indicate that their utilization yields as much as 10-15 rubles profit per ruble of outlays.

In addition to the functioning of the equipment, there exists at least two other areas in which the use of a system of technical diagnosis substantially contributes to upgrading the quality of machines and mechanisms and, consequently, to accelerating scientific and technical progress. This applies to the use of said systems at the stages of testing and developing designs and technologies of machines and mechanisms and their serial production. We know that the testing of new prototypes occasionally drags out for a number of years, as the result of which frequently the machines serially produced are already morally obsolete. Technical diagnosis enables us substantially to reduce this process and, therefore, drastically to lower outlays related to testing and completing newly developed machines. In serial production, the use of diagnosis provides opportunities for accurately establishing whether a machine meets technical specifications. This means that the use of a technical diagnosis at the stage of output control of finished goods can prevent the shipment of substandard items to consumers.

Furthermore, in this case the real possibility appears of assessing, on the basis of forecasting methods, the useful life and degree of impeccable condition of each item and to record said useful life in its documentation.

A broad, particularly in industrially developed countries (United States, Japan, England, France, FRG and others), the designing and wide use of technical diagnosis are quite intensive. At the present time virtually all rather complex technical instruments have built-in control and random diagnosis systems. This applies not only to complex technical systems, such as turbines, reactors, processing centers, etc., but also relatively simple ones, such as combines, tractors, trucks and even passenger cars. Particular attention is ascribed to the system of diagnosis in connection with the creation of so-called unmanned production facilities. Thus, in Japan they are organically combined with production control systems, including the extensive use of computers in controlling technological and organization processes. Computers allow us to develop diagnostic procedures for stages in the production of an item, thus ensuring its high quality. In a number of Western European countries the serial production of equipment (readers, primary data processors, analyzers, special computers, etc.) has been organized, the use of which ensures the development of efficient diagnostic systems for various technical facilities.

The development and extensive application of technical diagnosis systems becomes particularly topical now, in connection with the long-term developments of scientific and technical progress. Essentially, this means the following: first, increasingly complex automated systems are replacing relatively simple and inexpensive machinery. Thus, metal-cutting machine tools are being replaced by processing centers, which are quite complex and very expensive systems with numerical program controls. Their idling and repairs lead to losses which exceed by many times outlays related to the idling and repairs of simpler machinery. Secondly, industry is beginning to use flexible production systems and "unmanned" technologies. In traditional production systems, workers supervise the machine tools. Should their faulty work lead to the production of defective goods they are detected by the worker and the machine tool is stopped. In flexible automated production systems, control over the work of each unit within the system and the detection of

irregularities which may develop can be achieved exclusively with technical means. Their absence would result in the following situation: let us assume that an irregularity has developed in a given machine tool or processing center operating as part of a series, thus leading to deviations from the technological process and, as a consequence, to the manufacturing of a defective item. Such an item would not be immediately removed from the production cycle but would move along from one machine tool or processing center to another, each one of which will be "working" on the item, thus wearing itself out and wasting power.

A number of organizations in our country (let us name, above all, the Institute of Electric Welding imeni Ye.O. Paton of the UkrSSR Academy of Sciences, the Machine Building Institute imeni A.A. Blagonravov of the USSR Academy of Sciences, the Spektr NPO, the USSR Gossagroprom GOSNITI, the Riga Special Design Diagnosis Bureau, USSR Ministry of Automotive Industry, and others) are engaged in intensive theoretical and applied research in the area of technical diagnosis. Some results have already been obtained and applied in industry and agriculture.

Nevertheless, we must point out that despite the obvious and quite great significance of technical diagnosis systems and the fact that their utilization most directly affects the conservation of resources and the acceleration of scientific and technical progress, the necessary attention to their development and application is still not subject to proper attention in our country. For the time being, work in the field of diagnosis is conducted by a variety of organizations on an uncoordinated basis, instead of being related within a single program and specific NIOKR plans. Nor are specialists capable of developing and operating technical diagnosis systems being trained.

The country's VUZs have no technical diagnosis departments, nor do they teach this subject. We must also point out that the specialty "technical diagnosis" is not included in the list of scientific specialties on which dissertations can be defended.

The lack of a specialized journal or information bulletin on problems of technical diagnosis greatly hinders the development of research in this area and the exchange of experience, which frequently leads to the duplication of projects and to the fact that some areas are undeservedly ignored.

With the exception of the very small although quite skilled Riga SKBD of the Ministry of Automotive Industry, there is not specialized organization in the country developing technical diagnosis systems, although such systems have the interesting feature that the apparatus and mathematical support they need are largely the same as those of the diagnosed objects. This creates favorable opportunities for developing standardized universal systems which could service a broad range of machinery. It is precisely in this connection that the organization of a scientific-production association, either on the basis of the facilities of an existing one or even the creation a new association, should be most expediently put under the jurisdiction of the USSR Ministry of Machine-Tool and Tool Building Industry, which would enable us to solve problems of developing, multiplying and extensively applying in industry and agricultural production standardized technical diagnosis systems.

Unquestionably, energetic steps taken in the development and application of such systems and the training of proper cadres would not only yield tremendous economic benefits but also would give us the practical opportunity of intensively developing essentially new machines and machine systems, technologies and instruments and would ensure their efficient utilization.

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## SPECIALIZATION IN MACHINE BUILDING

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[Letter to the editors by V. Zamalin, chairman of the Moscow Oblast Machine Building Industry NTO Board Standardization Section]

[Text] In my opinion, specialized machine building output is one area to which unforgivably little attention is being paid in the tremendous program for the acceleration of scientific and technical progress.

The level of part and assembly specialization as a whole for 11 machine building ministries does not exceed 7-10 percent; it is about 3 percent for the machine-tool, instrument and electrical engineering industries and about 6-10 percent for the Ministries of Power Machine Building, Heavy and Transport Machine Building and Machine Building for Light and Food Industry and Household Appliances. This level is approximately 17 and 26 percent, respectively, for only two ministries: the Ministry of Tractor and Agricultural Machine Building and the Ministry of Automotive Industry.

Large amounts of identical items are being produced in small series and on a low quality level and with the use of different and sometimes obsolete technology. Thus, for example, enterprises of 12 different ministries are engaged in the production of slide bearings, which are becoming increasingly important today in worldwide machine building. The Ministries of Automotive Industry, Tractor and Agricultural Machine Building and Power Machine Building alone produce about 240 million slide bearings per year without proper coordination of this work. Nor is there an organization in charge of promoting a unified technical policy in this area.

The development, approval and utilization of standard size and type of series for machines and equipment and their components are being inadmissibly delayed in some machine building sectors. This substantially hinders the expansion and intensification of specialization in the production of identical items by enterprises under different ministries. Thus, for example, six sectors produce about 150 models of nonstandardized diesel engines. The Ministry of Tractor and Agricultural Machine Building produces the ATZ-50 and M-40 plowing tractors whose technical specifications are similar but who include no more than 2.7 percent of standardized components; the Ministry of Automotive Industry has totally failed to standardize assemblies and machine units for

ZIL, KamAZ and various types of passenger motor vehicles; although a family of KamAZ diesel engines is available, diesel engines for the ZIL series, of similar parameters but entirely different in terms of components have been developed. Unfortunately, many more such examples could be cited.

As we know, there are four basic forms of specialization: item, assembly and part, technological and functional.

In the case of item specialization, individual enterprises concentrate on the production of specific items consistent with their area of specialization (such as groups of machine tools--automatic lathes, grinding tools, etc.). In assembly and part specialization, individual mass-produced standardized items and assembly units are manufactured. This is the economically most advantageous form of specialization. In this case the plants are classified into assembly (head) and related enterprises, which cooperate with the head enterprises. With proper standardization of output, they can produce individual parts of items widely used in machine building in other industrial sectors (mountings, ball bearings, springs, universal joints, cogwheels, etc.).

For example, today the country's national economy uses more than 80,000 different types of cogwheels, up to 600 million pieces of which are produced by 2,000 plants. A study has indicated, however, that standardization could reduce the number of varieties by a factor of 20, which would enable us to center their production at no more than four specialized plants.

Technological specialization means that separate specialized plants, shops, departments, sections and even individual work places specialize in specific stages of the technological process (such as the production of ingots, forgings and stampings, the manufacturing of welded metal structures, machining and assembling in machine building, etc.). Such specialization enables us to increase the scale of output and labor productivity, to reduce production costs, improve quality and ensure the more efficient utilization of means of production (equipment, materials, and technological implements).

For example, more than 2,500 shops and enterprises produce castings mainly for their own needs. Two-thirds of this output is manufactured by only 180 enterprises with optimal capacities. Here annual output per worker is approximately tenfold that of small shops and production costs are lower by one-half. Specializing in forgings and stampings is equally efficient.

A study has indicated that ingots, forgings and stampings account for more than 55 percent of all machine and equipment parts. For the time being, however, the full need for such items cannot be met, for few large specialized enterprises and shops are engaged in their manufacturing.

Functional specialization, or specialized auxiliary production, assumes great importance in machine building because of its high volume. This means the development of independent specialized production facilities servicing other enterprises or shops: specialized instrument or repair plants, computer centers, plants for the production of transportation and packaging containers, organizations servicing power systems, etc.

Thus, for example, more than 450,000 workers are engaged in the production of instruments in the country. Technological equipment for the machine building enterprises themselves is produced mainly at instrument shops rather than specialized plants. As the result of poor labor organization and the low level of mechanization, labor productivity and the utilization of equipment in such shops are lower by a factor of 3-4 compared to specialized facilities, and production costs are higher. For example, the manufacturing of a cutting tool equipped with a hard alloy blade costs 40 kopeks at a specialized plant, while the cost at a nonspecialized one is higher by a factor of 2.5-4. About 80 percent of the enterprises have shops and sections producing mountings, up to 10 tons per year, manufactured at a loss. Many such facilities use obsolete technology and have great overexpenditures of metal and high labor intensiveness. Their actual production cost is twice the wholesale price and higher than at specialized enterprises by a factor of 10-12. Great possibilities exist in repair specialization as well.

No single machine building item is created from beginning to end at a single plant. Nevertheless, a limited set of complementing items, parts and semifinished pieces are used. They are known as output for general machine building purposes. The manufacturing of such items by fully equipped specialized production facilities is a major component of scientific and technical progress in machine building. Therefore, the efficient organization of intersectorial facilities producing such items and their accelerated development become one of the main trends of intensification.

The cost of parts for general machine building use and spare parts is quite high. Because of the scattered location of semifinished production facilities (i.e., those engaged in the production of castings, stampings, welded structures, etc.), which employ hundreds of thousands of surplus workers, excess production costs run to billions of rubles. A sober economic consideration calls for the creation of centralized procurement facilities which would supply enterprises within a specific area, regardless of departmental affiliation of consumers. This raises the question of the development of regional specialization facilities producing items for general machine building use. It is important to bear in mind that scientific and technical progress broadens the variety of such items steadily and continuously. Today machine blocks performing control functions (electronic and electrical engineering systems and components) are assuming increasing intersectorial significance.

The development of intersectorial production facilities is a topical, one could say even crucial, problem. The 12th 5-Year Plan stipulates major assignments in this area. The USSR Gosplan pays serious attention to problems of specialization in machine building (as exemplified by the article by G. Stroganov "The Machine Building Complex in the 12th 5-Year Plan: Prospects and Development Priorities," KOMMUNIST, No 10, 1986). Furthermore, in my view, for the time being it is not entirely clear how to organize the implementation of the stressed yet realistic assignments for the intensification of specialization, as stipulated in the 1986-1990 plan. One

of the ways (suggested by both scientists and practical workers) would be the creation of an all-union scientific-production association for the production of items for general machine building use. Obviously, other suggestions have been made as well. This is a problem requiring a thorough study.

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5003  
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## CRITICAL REVIEW OF ECONOMIC LEGISLATION

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[Letter to the editors by Candidate of Juridical Sciences V. Prozorov, senior scientific associate, All-Union Scientific Research Institute of Soviet Legislation]

[Text] In my opinion, the radical reorganization of the economic mechanism and the entire system of planned economic management requires a critical review of a considerable part of economic legislation, for legal documents which were passed in previous decades preserve, so to say, the extensive forms of economic development. If we leave untouched this old standardizing-legal base of the economic mechanism we would hardly be able reliably to ensure the systematic implementation of the strategy of acceleration.

Current economic legislation contains dozens of stipulations which outline the rights of economic management authorities in amending approved plans and "ordering" economic activities of primary economic units--enterprises and associations. Under these circumstances, the right of an enterprise to have stable and balanced planned assignments frequently loses its real meaning. The conversion to economic management methods on all management levels dictates the need for investigating the substantiation of the numerous rights of management bodies in ordering and controlling enterprise activities. With the application of new economic management methods such rights must be inevitably curtailed.

Violations of the optimal correlation between economic and administrative management methods are manifested in the lack of coordination and balance in the standardizing-legal and practical control of enterprise activities. Management orders frequently block the observance of standard regulations, lower their efficiency and destabilize economic management conditions. This applies, for example, to amending enterprise plans by superior authorities, linked with results of the implementation of the previous year's plan. This connection is interpreted today as broadly as one may wish. There is no mechanism for controlling the observance of deadlines and the substantiation of plan amendments. The enterprises have no right to object to plan amendments which may violate both order and deadlines. As a result, in practice many regulations on the procedure and deadlines for signing economic contracts are left unused.

Whenever shortcomings in economic legislation are discussed, most frequently attention is drawn to its cumbersome, contradictory and disorderly nature. This is largely the consequence of the low efficiency of legal controls. The lack of solution of one economic problem or another encourages the passing of ever new laws. Yet, as their number grows, disparities and contradictions accumulate. In itself, however, reducing the number of laws, from several tens of thousands to a few thousand, for example, although making legislation easier to absorb, is still no guarantee that the work of the economic mechanism will improve. Two thousand laws may turn out to be just as ineffective as 20,000. All depends on their content and their juridically knowledgeable formulation, i.e., of their quality.

The main reason for the inadequate efficiency of economic legislation is sometimes seen in the violation of its stipulations. However, if decisions made on a national scale are either violated or not observed as planned, the primary units should not be always blamed. The real reason for the inadequate efficiency of legal stipulations may be explained only with the help of special sociological studies, the method for which, incidentally, has been developed by juridical science. However, the possibility of extensive studies of the efficiency of legal regulations does not trigger any enthusiasm on the part of the administrative apparatus, for such work would necessarily bring to light cases of unjustified management decisions due to the incompetence of some officials.

Quality legislation is the main prerequisite for its efficiency. Prerequisites for the implementation of decisions must be included in the legal foundations of the economic mechanism. Economic legislation today contains an abundance of appeals, evaluations and assignments; it describes the desired state of affairs in most general outlines, whereas the standard-legal mechanism, which must ensure the implementation of one stipulation or another, is frequently either absent or partial and incomplete. Many stipulations are insufficiently specific, making their implementation difficult. By demanding that something be intensified, improved or strengthened, they essentially do not make anyone do anything. For example, the task of "lowering the volume of unfinished construction to the levels stipulated by the standards, within the next 3 to 4 years," was made part of laws passed in 1969, 1979 and 1984. However, the actual steps which could eliminate the reasons for increased "unfinished construction" were not taken.

Under contemporary conditions it is particularly important to prevent, as V.I. Lenin said, legal acts to be "sweeping, abstract, and impractical" ("Poln. Sobr. Soch." [Complete Collected Works], vol 40, p 82). It would be expedient for the formulation of one economic problem of another to be accompanied by the formulation of a legal mechanism which would ensure its strict implementation, for which reason it would stipulate both steps to encourage the desired behavior as well as measures of juridical responsibility for the violation of stipulated rules.

The better matters are organized the less necessary daily instructions on specific routine problems will become. The organization of stable work by an association or sector, or by the entire economic mechanism is possible only on

the basis of common, steadily observed rules, i.e., on the basis of an expanded standard-legal regulation. Yet, in drafting laws frequently preference is given to instructions of a one-time nature. Essentially, they consist of instructions of how to carry out a specific project which, as it were, should be systematically carried out by a given authority or official by virtue of their tasks and obligations, without necessitating special instructions and reminders.

Many stipulations in economic laws seem legal, but only on the surface. Actually, they do not call for rights and obligations and their violation does not entail legal responsibility. For example, the fact that a superior authority violates its obligations by failing to make proper changes in all related production and economic activities of an enterprise after it has amended its plan entails no consequences. The repeated legislative stipulation to the effect that a necessary change in planned enterprise assignments may take place only after the problem has been discussed with the administration of the enterprise, does not grant the enterprise any real rights. Ministries and departments which draft resolutions for superior economic management authorities are naturally not interested in restricting the extensive opportunities they have today of ordering current economic activities by enterprises or in setting real legal liability for officials and managerial authorities for violating laws in the area of administrative activities. The USSR and Union Republic Foundations of Civic Legislation, which were adopted as early as 1961, call for the promulgation of a law on material liability of state managerial authorities for harm caused to other organizations. To this day, however, no such law has been passed.

The purpose of legislation is to promote the establishment and extensive dissemination of new economic management methods. It includes a number of stipulations which forbid managerial authorities to encroach on enterprise rights. Generally speaking, incidentally, a number of such prohibitions have piled up in our economic legislation in the course of decades. This includes simple prohibitions, strict prohibitions and categorical prohibitions. For example, the prohibition of exploiting petroleum deposits without the simultaneous completion of systems for the collection of petroleum gas is covered in a variety of laws starting with the beginning of the 1960s and passed with virtually each new 5-year plan. Meanwhile, to this day gas torches are burning. Stipulations are regularly being issued banning the violation of the rights of enterprises, proving the fact that such rights are being steadily violated. This will necessarily go on as long as the observance of such prohibitions is not secured legally!

Property liability and personal juridical responsibility of officials guilty of violating the rights of enterprises must be instituted if the economic autonomy of enterprises is to be truly respected. The state arbitration authorities must also be granted the right to annul any administrative act passed in violation of the stipulated order, on the request of the enterprise. It would be expedient to formulate and approve uniform rules for drafting laws which would upgrade the role of the USSR Ministry of Justice and the legal services of economic managerial authorities on all levels in securing the legal substantiation of administrative decisions. In order for departmental regulations to be entirely consistent with the stipulations of superior

authorities we must also ensure the coordinated formulation of at least the most important drafts of such documents. A procedure must be established which would make it mandatory for departmental rules to become legally effective as of the moment of their publication, providing that they have already been recorded and assigned a state number.

I am convinced that plans for draft laws, which are currently essentially plans for filling gaps in legislation and for the unification and codification of legal acts must also become a plan for perfecting their content. The implementation of such a plan must involve the elimination of previous defects in legal regulations which blocked the necessary effect of legal decisions. It is important to perfect the procedure for drafting suggestions for the 5-year plan for legislative work. Many of these suggestions are currently unsubstantiated, which hinders their evaluation. Therefore, explanatory materials for a draft bill should be formulated on the basis of a strictly determined procedure and contain instructions on their specific socioeconomic objectives and the extent to which they will be obtained should a given decision be made. It is to be hoped that such a procedure will discipline the drafters of legal bills and upgrade the quality of the bills and create objective foundations for comparing expectations with actual results. At the present time virtually no one bears responsibility for the adoption of "meaningless" laws or drafting unconsidered resolutions, which is one of the reasons for excessive paper shuffling.

The CPSU Central Committee political report to the 27th Party Congress noted that departments are failing to display proper interest in the implementation of promising suggestions submitted by social scientists. This applies also to jurists. Jurists who are asked to draft laws occasionally find themselves in the position of "poor relatives," deprived of voting rights. This situation does not contribute in the least to improving results of legal work. Nevertheless, juridical science can and should contribute a great deal today to the radical improvement of legal control of the economy and to radical improvements in economic legislation. Extensive work lies ahead in this direction and must be undertaken without delay.

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## EVERYTHING WITHIN MAN--EVERYTHING FOR MAN

### MAN'S PSYCHOLOGICAL ABILITIES AND PROBLEMS OF EDUCATION

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[Article by Professor L. Tsvetkova, doctor of psychological sciences]

[Text] The enhancement of the human factor is a necessary prerequisite and condition for solving the party's problem of accelerating our society's socioeconomic development. Furthermore, the maximal and free development of the entire variety of human capabilities and talents, the reorganization of the thinking and enrichment of the spiritual world of the people are also the most important objectives of acceleration, characterizing its humanistic dimension.

The steady development and increased difficulty of conditions governing the social and production life of the contemporary person raised more urgently than ever problems of his intellectual and emotional resources and reserves and the possibilities and ways of their most efficient harnessing and comprehensive identification. The solution of such problems requires profound theoretical interpretation and reliance on the entire set of sciences of man, not the least among which is psychology, which studies the development of the human mind, personality, consciousness and will and his sensory-emotional sphere.

Man's possibilities of mental development are exceptionally broad and varied and by no means entirely studied. In any case, most psychologists agree that ordinary human activities affect (to a different extent, according to the person) only a minor part of the resources of his brain. Most of them are kept as though in reserve and are not automatically used. To understand the prerequisites and conditions needed for the realization of man's tremendous psychophysiological possibilities and to learn how to put them to practical use is a most relevant scientific problem. Some results have already been obtained in solving it.

The level of theoretical concepts of the nature and essence of mental processes achieved by contemporary Soviet psychology enables us as of now to speak of the practical possibility of the conscious and purposeful development in a person of one mental function or capability or another. This possibility has been repeatedly confirmed through scientific experimentation. Thus, for example, we are quite familiar with the experiment conducted by A.N. Leontyev,

as early as the 1930s, on the artificial development of new sensations in man, sensations which he ordinarily does not have, such as skin sensitivity to light, i.e., the ability of having a subjective sensory feeling of the influence of light on the palm of the hand (see A.N. Leontyev, "Problemy Razvitiya Psichiki" [Problems of the Development of the Psyche]. Moscow, 1981, pp 15-160).

The summation and utilization of such and similar scientific results in training and education could result in substantially broadening education possibilities. However, so far this is being obstructed by the illusion of the congenital and predetermined development of mental faculties and functions, rooted in ordinary thinking and uncritically accepted by many educators. Naturally, no one questions the fact that in the course of his development in society and exposure to culture man acquires and perfects within himself a number of things. He masters his native language more or less spontaneously, he must be purposefully taught to read, write and count, etc. However, when it becomes a question of the ability itself to perform one mental action or another and the corresponding brain structure, they are frequently presented as existing in their finished state or else developing spontaneously, regardless of training and education. Hence, for example, the frequent complaint by teachers of the lack of ability in a student with whom allegedly nothing can be done. The origin of such concepts may be explained by the fact than an innumerable number of influences of the social environment to which the individual is subjected ever since his birth significantly conceal the results of the activities of the educator and hinder the determination of the mental qualities given by nature, those triggered by the spontaneous influence of society and, finally, those which are the result of conscious educational influence. However, we are also familiar with extreme pedagogical situations and tasks which demand the purposeful shaping of precisely psychological capabilities. Available experience in solving such problems "illuminates" the actual nature of the process of the development of the human psyche, reflecting in its pure aspect the tremendous and decisive role which deliberate and purposeful education plays in this process. The interpretation of this experience could be of major importance to educational theory and practice.

There are people who have lost the ability to speak and understand speech, who have lost the habit of counting, who have difficulty in orienting themselves in space or who have lost the concept of "left" and "right." These people, who have preserved their overall personality, who behave properly, and who are aware of and acutely suffer from their defects, are unable to count money, make purchases, cross a street by themselves, understand speech and ask a question or answer it. They have lost their main wealth--their ability and possibility of communicating with those around them. The threat which this constitutes needs no explanation, for lack of contacts with people could result in a breakdown of the personality. Such violations in mental activities may be the result of different brain diseases (stroke, brain tumor, or cranial-brain trauma), which result in the irreversible destruction of one part of the cortex or another. To teach such people to speak and understand human speech, to write, read and count, to remember new facts and recall the past, to be sad or happy, all over again, and to restore them for purposes of work and social life is a most difficult and humane task of science and health

care. Its solution has been assumed by a relatively new branch of knowledge--neuropsychology.

Let me emphasize that one must restore a lost mental function rather than adapt the patient to his defect; one must return him to a normal social environment rather than lead him into a simplified one. Is this task possible? For here the holy of holies of man--his brain--has been affected (irreversibly at that!). For a long time it was believed that damaged mental processes as a result of brain damage cannot be restored and that such patients remain handicapped for life. Today this view has been refuted theoretically and, which is particularly important, practically.

An accident involved a young man of 30, a teacher of Russian language and literature of senior secondary school grades. He was hurt most severely and significant parts of the parietal-temporal-occipital areas of his brain cortex were destroyed. After he was out of danger and began to scarify, it became clear that the victim had suffered a complex and severe disturbance of a number of mental processes: the ability to speak, to count and the engage in constructive activities. He had unlearned how to ask questions and understand answers, or apply any complex logical-grammatical structure, reducing his entire means of contacts with those around him to the simplest sentences consisting of two or three words. One can easily imagine what this meant to a teacher of literature and language. What kind of study of a literary work or grammatical analysis of a sentence could there be a question of without the ability to recognize declinations of words and the concept of sentences such as "an elephant is bigger than a fly" or "my father's brother" had become an insoluble puzzle. It looked as though his situation was hopeless, for nerve cells do not regenerate. Nevertheless, with the help of physicians and neuropsychologists, the patient was able to surmount his infirmity. He was not only able simply to surmount it but also 3 years after the accident to resume his profession in the school, among his students.

How did this become possible? No, it was no miracle. The defects of the brain did not disappear; the lost functions were not restored "by themselves." They were purposefully restored or, to put it more accurately, they were "reestablished," through a long and difficult process of treatment, known as neuropsychological rehabilitation.

The neuropsychologist operates without a scalpel. He does not invade the brain and does not sew up destroyed neuron connections. The essence of the methods used in neuropsychological rehabilitation is, by organizing and controlling in a proper form external object activities by the patient, to thus restructure brain activities and to involve new intrabrain connections and preserved areas of the cortex in performing disturbed or lost mental functions. The theory and practice of restorative training are based on new theoretical concepts on the nature of the human mind, which were established as early as the end of the 20s and beginning of the 1930s by L.S. Vygotskiy and developed in the works of his followers.

A radical accomplishment of Soviet psychological science is the application in psychology of the historical method and of specific scientific proofs of the Marxist thesis of the human mind as a reflection of the objective world and as

a product of material sociohistorical practice. This thesis enabled us to approach human mental activities from positions essentially different from those of idealism or vulgar materialism.

Above all, Soviet psychology has proved, both theoretically and experimentally, that the state of mind is not a result or direct extension of the natural development of basic forms of behavior or the mental life of animals but a qualitatively new result of the sociohistorical development of mankind. The human mental functions are shaped in the course of his life, through the mastery of social experience. The process of such mastery itself is a specific form of mental development inherent only in man. This applies not only to the so-called higher mental functions (selective attention, logical memory, abstract thought). It has been established that even simple and seemingly innate functions, such as tonal (sound level) hearing, are actually of a social nature and develop in the course of human life.

Social practice (labor above all) shapes and strengthens means of joint activities among people and forms of communication among them and, together with that, also complex and flexible means of controlling behavior, a world of images and concepts which, precisely, are the content of human consciousness.

The theory of the gradual shaping of mental actions, developed by P.Ya. Galperin and his students, proved that the development of higher mental processes, whether processes of active recall, shaping of concepts or counting, always undergo three main stages in humans. Initially, they take place through a series of expanded external material actions involving surrounding objects. Subsequently, in the course of joint activities among people and contacts among them, such external actions begin to take place with the participation of speech, which connects all mental processes and raises them to a higher level of organization. Speech takes over from objects and phenomena in the absence of the latter, thus becoming the intermediary in the development of any mental process. Finally, external actions gradually disappear, shift into internal speech and begin to operate as strictly mental.

This process, known as interiorizing, leads to the fact that in the adult most skills and habits assume such a contracted and automated nature that the study of the operations they involve becomes virtually impossible. This was the reason for which for a long time mental processes were considered in psychology as direct emotions, innate and no longer factorized "properties" of spiritual life. Actually, physical functions have an indirect and a complex, multiple-level and multiple-step structure. They assume their shape gradually, in the course of the individual's development (ontogenesis).

Therefore, the higher mental functions are the functions of man, included in a comprehensive system of labor activities and social relations, achieved through labor tools and language, which are collectively developed means of activities and intercourse. It is not the individual brain which thinks, but, as V.I. Lenin quite clearly expressed the essence of this matter, it is man who thinks with the help of the brain. The brain plays the role of the higher integration machinery of all life processes and in organizing the active interaction between man and his surroundings.

The material substratum and the psychophysiological foundations of higher mental functions are found in the functional systems of the brain, which are complex dynamic structures based on the joint work of individual, sometimes territorially distant, parts of the brain, each one of which performs a specific role and makes its specific contribution to the work of the entire functional system. The dynamic structures of the different parts of the brain, as studies have indicated, can change with the development of a given mental activity. They may also be restructured should some parts of the brain be damaged and thereby violate the integrity of the functional system.

The functional systems, which are the material substratum of mental functions, "do not appear ready-made with the birth of the child. Nor do they mature independently. They are formed in the process of the child's intercourse and object activities...." (A.R. Luria, "Vysshie Korkovyye Funktsii Cheloveka" [Man's Higher Cortex Functions]. Moscow, 1969, p 34). Each functional system is multireceptoral. In other words, it possesses a certain set of afferent signals, i.e., signals received from different parts of the brain. These signals come from the afferent field, which ensures the normal work of the functional system. The afferent field develops in the course of ontogenesis, and its development follows the path of reducing the range of afferents, by emphasizing the "leading" one and putting the others in reserve. They do not disappear in this case but assume a latent (concealed) status. Here is an example: the process of writing includes no less than three components: 1. Acoustical analysis, and singling out sounds from the flow of speech; 2. Recoding such sounds into letters; 3. Recoding letters into motor analogues (a set of necessary moves, i.e., a tangible act). The psychophysiological foundation of this process is the combined work of speech-motor, aural, optical-spatial and motor analyzers, the flexible combinations among which are the functional system which leads to the process of writing. Such "component acts" always begin with expanded external motor components, which are then blocked and the act as a whole changes its initial structure, becoming increasingly reduced and automated. It is as a result of such transformations that appears a stable yet flexible system, which functions as a single organ. Thus, in the automation of the writing process in the adult, all afferents with the exception of one become latent, and the only remaining one--the motor--remains as the leading one.

As the higher mental functions develop, the functional systems turn into unified functional organs and the brain cortex becomes the organ which can establish new functional organs. In explaining their nature, A.N. Leont'ev wrote: "These are organs which function in the same way as ordinary morphologically permanent organs; however, they are different from the latter by the fact that they are a new creation which appears in the course of individual (ontogenetic) development. They are the material substratum of the specific abilities and functions which are developed in the course of man's mastery of the world of objects and phenomena--the works of culture--created by mankind" (A.N. Leont'ev, op cit., p 421).

The new scientific data on mental functions and their psychophysiological base laid the beginning of a new theory of the localization of mental processes. The brain does not have ready-made biologically inherited organs which determine its mental activities; mental functions are not primordial in the

brain. They are formed in the course of the life of the person and are based not on any specific part of the brain but on the dynamic systems of jointly operating areas. It has now been determined that a function such as writing, for example, is related to a number of brain lobes--postfrontal, inferior parietal, temporal and occipital parts of the cerebral cortex--the combined work of which ensures the overall act of writing, to which each brain area makes its specific contribution. The working combinations of the various lobes and levels of the brain, which make one function or another possible, change as the function develops and its localization in the child and the adult may be different. The localization of a function may change also in the case of brain damages which disturb the integrity of the functional system.

All of these new concepts concerning the mental functions, functional systems and their localization in the brain laid a firm theoretical and methodological foundation for seeking ways of restoring functions. Such a way was found by Soviet psychologists working together with neurologists, neurosurgeons and physiologists during the Great Patriotic War, when our scientists were assigned a task of national importance: ensure the restoration of the higher mental functions, such as speech, writing, reading, counting, etc., disturbed as a result of cranial-brain wounds suffered by dozens and hundreds of thousands of Soviet soldiers. A galaxy of brilliant psychologists, physiologists and neurologists took part in this project, headed by A.R. Luriya (A.N. Leontyev, S.L. Rubinshteyn, A.V. Zaporozhets, B.G. Ananyev, L.V. Zankov, E.S. Beyn, V.M. Kogan, N.I. Grashchenkov, B.V. Zeygarnik and others).

Soviet researchers were the first to undertake a restoration of higher mental functions on the basis of essentially new scientific concepts which, precisely, enabled them to develop and successfully to apply a new method for the restoration of mental functions: rebuilding the functional systems through restorative efficient training of wounded soldiers. It was then that a new area in psychology--neuropsychology--appeared, founded by A.R. Luriya.

Neuropsychology was the first to identify a number of features of violations of higher mental functions, which were quite important in understanding the ways of restoring them. Above all, clinical and experimental data proved that in local brain damages the higher mental function does not break down entirely but disintegrates. What is lost is one of its psychophysiological factors (kinesthetic, audial, somatospatial, etc.), which disturbs the function of the unified system. A.R. Luriya meant by "factor" the "specific function" of one brain structure or another. Factorial analysis enabled A.R. Luriya and his students to develop a new theory of aphasias (speech disturbance), identify their individual forms, depending on the mechanism, and also identify various forms of amnesia (memory disturbance), apraxia (disturbance in the ability to carry out purposeful movements), and others, caused by the mechanism of the disturbance of the localization of the brain damage.

It was established that in a damage caused to any part of the brain several mental functions could be disturbed (for example, a disturbance of the superior temporal gyrus of the cortex of the left hemisphere leads to disturbances in speech understanding, speech expression, reading and writing, caused by a defect of a single factor--phonematic hearing); on the other hand, the same mental function could be disturbed by damages to various parts of the

brain (speech recognition could be disturbed in damages caused to the temporal, parietal and parietooccipital sections of the cortex of the left hemisphere of the brain). However, even such a disturbance will have its own specific features depending on the damage to the brain and the specific disturbed link within the functional system. Such neuropsychological data directly indicate the ways and possibilities of restoring higher mental functions.

Actually, whereas a higher mental function has, as we saw, a complex and changing structure, and the brain mechanisms which implement it are a functional system based on the joint work of territorially independent brain areas, a local damage to the brain cannot lead to the total disappearance of a function. By destroying a single link, however, it disturbs (rather than terminates) the work of the entire functional system.

The question which arises is the following: How to restore the work of the injured functional system?

Knowing that the functional system is polyreceptorial and that in the adult the afferents from some parts of the brain are set in reserve, it becomes possible to restore the disturbed function above all by including in it new reserve units, at which point the same task will be performed on the basis of the newly included brain components. This also represents a new way for the restoration of the higher mental functions--the restructuring of functional systems, developed by Soviet scientists. Such reorganization does not take place in man spontaneously, for which reason a method of rational restorative training was developed, which remains the only accurate and scientific method for the restoration of disturbed higher mental functions in cases of local brain damages.

Practically, this method can be applied in two different ways. One is the use of the afferents of the disturbed functional system, which existed in ontogenesis and have passed in the adult into the "reserve fund," yielding to the lead afferent. The restorative training of the patients in this case is structured in such a way that the disturbed link in the functional system is replaced with a "spare" link.

Here is an example. As we pointed out, the writing process may be disturbed for a variety of reasons and, in particular, a defective phonematic hearing (sensory agraphia). Such a disturbance appears if the posterior third of the superior temporal gyrus is damaged. In such cases writing is totally disturbed. The people are unable to write a single letter, either dictated to them or by themselves, or unable to distinguish among speech sounds which they confuse in their hearing, because of sound similarity (they put K or Kh instead of G; they write P or M instead of B; they write T, L, N instead of D, and so on). We know, however, that when children begin to write a number of afferents become involved, coming from different parts of the brain--acoustical, motor-kinesthetic, motor, and optical. Consequently, the task is to replace the disturbed acoustical afferent by the preserved optical-kinesthetic (visual-motor) analysis of sound.

The method for restoring the ability to write in sensory agraphia should be directed toward surmounting the defect of phonematic hearing and developing the new method for distinguishing sounds, which was disturbed in the acoustical link, using the preserved analyzer systems--kinetic and visual--and on the basis of including in this process sound distinction and the meaningful speech structure. To this purpose, we use work methods with patients which help to analyze sounds through the simultaneous verbalizing (reliance on preserved motor afferent) and visual, based on the "oral image of sound" (the patient looks at the lips of the speaker and at his own lips in the process of speaking), as well as visual use of a letter corresponding to the sound. A new functional system is developed in the patient on the basis of reserve afferents, which will develop the writing process on a new basis in which the kinesthetic and visual analyzers rather than the acoustical will become leading. Such a creation of new functional systems takes place through an intrasystemic restructuring.

The second method also uses the development of new functional systems but on the basis of including new units (afferents) which were previously not directly involved in the disturbed functional system. By including new analyzer systems through the use of special methods, here again we redesign and structure a new functional system, this time with the use of new afferents. This is the method of the intersystemic restructuring of the damaged function. For example, a damage to the occipital segments of the cortex of the left hemisphere of the brain frequently leads to reading disturbances, to the so-called optical alexia, the principal mechanism of which is defects in the optical perception of letters. In that case, the patients confuse superficially similar letters, being unable to identify their distinguishing features (o-a, n-m, p-q, etc.). The methods used in this case are those of restorative training, which involve the participation of other parts of the brain and their afferents, with a view to correcting the disturbed differentiated perception and recognition of letters, but on a different brain basis. This is applied through proper methods such as, for example, touching three-dimensional letters, which develops a kinesthetic sensation, and the afferent kinesthetic analyzer which had previously not participated in the reading process. The method of tracing a letter with the hand in the air introduces the motor image of letters within the reading system and the method of hearing the sound (or the word) with the simultaneous reliance on the visual perception of the corresponding letter (or written word) and their voicing are aimed at systematically influencing the defect (hearing + seeing + voicing). These methods ensure the interaction among the acoustical, motor speech and visual analyzers.

An important and very efficient way of restoring functions is the method of transferring the damaged function to another level of organization. Thus, we know that in speech disturbances (aphasia), as a rule, a more preserved level of subconscious and well-automated speech from previous experience remains--consecutive counting, naming the days of the weeks and the months, poems and songs; the rhythmical-melodic aspect of the speech is preserved, etc. In a severe disturbance of verbal speech, which is the result of defects in the motor-kinesthetic foundations, the patients lose the ability for verbal speech almost entirely (afferent motor aphasia). They can pronounce neither words nor sentences, but if at the initial training stages the speech is adapted to

a rhythmical pattern (words or phrases are delivered in a sing-song manner, with a beat) or as a song, it becomes possible for the patients to pronounce words and sentences. Such methods are used as part of an entire system of methods for restoring the patient's speech capacity.

Therefore, the studies conducted by the Soviet scientists marked success in an area which was considered previously hopeless, such as restoring brain functions disturbed as the result of local damages. Such successes also indicate possible results if practical work is based on accurate scientific theoretical concepts of brain control of the higher mental functions of man.

New natural scientific, psychological and neuropsychological data indicated that the development of the human brain is achieved by forming new functional systems which arise on the basis of social and physical activities as man engages in different forms of intercourse with other people. These functional systems are not inherited but are shaped each time anew, in the course of human life. It is precisely thus that man develops the ability to read, write, count, solve problems, have a logical memory, and so on, for the brain does not have any special morphological organs for this purpose. It is on the basis of the main analyzer systems that in the course of the person's life functional physiological organs are formed, which become the material substratum of the human mind.

Thanks to the development of a number of sciences, neuropsychology above all, today we have extremely rich data which enable us to identify the principles governing the functional organization of the brain, determine the main blocks within it and the role played by the individual systems in the brain in organizing mental processes, on the one hand. On the other, neuropsychology and restorative training will practically confirm the Marxist concept that human mental activities and consciousness are not based on the work of the human brain outside of a social environment. These areas of knowledge and their practical application proved that higher mental functions are, naturally, performed by the brain. However, they are developed in the course of the interrelationship between man and the social environment and are shaped under the conditions of a social life which, in turn, provides conditions for the appearance of new functional systems on the basis of which the brain operates. For that reason, restorative training involves corresponding ways and means of organizing the restorative process, taking into consideration, on the one hand, the social nature of man's mental functions and, on the other, the mobility of functional systems which are their psychophysiological base. Patient rehabilitation is part of a new field of knowledge--medical pedagogy, which appears at the point where psychology, medicine and education converge.

Neuropsychology and the experience of restoration of functions are important not only in medical pedagogy; they also shed light on the problem of general didactics. The educator must be familiar with the structure of mental processes and the laws of their restoration. He must take into consideration the important role of each link in the psychological structure of the functions in order to ensure its full utilization. A great deal of such knowledge is provided by neuropsychology and rehabilitation training.

Practical experience in the instruction of children at school is well acquainted with cases in which knowledge and skills are mastered with noticeable difficulty, when the student finds it very difficult to master processes such as writing, reading, counting, solving problems in arithmetic, understanding complex logical-grammatical structures and a difficult text as a whole, and so on. The teacher frequently faces such obstacles, related to the individual features of the student and the general laws governing the development of the brain, and the structure of mental processes and of the process of mastering knowledge. Unless he is familiar with such features, he may make the mistake of applying improper training methods. There always are students who find it difficult to write and, despite all efforts, for a long time keep making a great deal of mistakes, which are totally unrelated to lack of knowledge of the rules. At best, the reason remains unknown to the teacher; at worst it is misinterpreted.

Similar difficulties arise in learning from a textbook: the student can easily read a sentence but is unable to understand the text as a whole; in counting, he can add properly but is unable to subtract, etc. Finally, in a large number of cases the student encounters almost insurmountable difficulties in solving problems in mathematics, which cannot be explained either by inadequate mental development of children in the lower grades or their insufficient general development and special school training, etc.

In school training and, frequently, method aids, difficulties experienced in writing are related merely to verbal (speech) difficulties. However, this is not always the case. Neuropsychology has indicated that the writing process includes a number of areas--aural-motor and visual-motor coordination of the hand, acoustical and kinesthetic analysis of sound and space perception. Any one of these may turn out to have been underdeveloped, at which point difficulties in teaching the student appear. However, a qualitative study of difficulties and errors would indicate what part of this process must be corrected.

For example, we frequently note in children of preschool or junior school age elements of "mirror" writing, in which spatially oriented letters are written by the children wrongly, which is proper for the children, for the tertiary areas of the parietooccipital areas, which are responsible for spatial perception, do not mature before the ages of 8-10. Various difficulties may be experienced by children at different ages. In order to surmount them, teachers and method workers must take into consideration both such individual characteristics as well as the overall structure of mental processes, the complex organization of the brain and the genetic features of its development.

The neuropsychological study if the main processes of mastering knowledge and skills in the case of damages to individual areas of the brain could provide substantial data for the identification of factors which create difficulties in the mastery of mental actions and, furthermore, enable us to identify in their relatively pure aspect the means and methods with the help of which such difficulties can be corrected. For whereas today we have mastered the methods for restoring many most complex forms of mental activity resulting from a damaged brain, one can easily imagine what such methods could yield in the training and education of healthy people. This problem is becoming

increasingly topical today, when scientific and technical progress and the modern production process steadily increase requirements for the development of man and his professional and individual qualities. Under such conditions, as V. Zinchenko, G. Kovalenko and V. Munipov accurately note, "It is important not only to adapt tools to man but also actively to develop the abilities of man himself in accordance with the requirements of technical progress" (KOMMUNIST, No 9, 1986, p 75). Experience in rehabilitation training, entirely structured on the basis of the identification of brain reserves and the deliberate, purposeful and controlled shaping of higher mental functions can substantially contribute to the solution of this problem.

Naturally, there could not even be a question of mechanically applying the specific methods used in rehabilitation training to training in general. It is important, however, to understand and to be able to apply the most general principle, which is the same for all varieties of instruction. It is that any mental function of man is always shaped and exists initially as an externally developed object activity in the course of contacts and cooperation with other people. The level of mental development of a person and the development of his brain will depend also on the extent to which such activities are varied and meaningful and how knowledgeably they have been organized.

Neuropsychology and the practice of rehabilitation training have brought to light the exclusive plasticity and universality of the human brain and its inexhaustible possibilities and reserves. The identification of such possibilities and reserves, and the formulation of adequate methods for their most efficient application are the most important task of the science of man and the theory and practice of his comprehensive and harmonious development and education. Soviet neuropsychology is making its contribution to the solution of this problem.

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Man of the New World: Concerns, Ideals, Values

WORK MEANS CREATIVITY

Moscow KOMMUNIST in Russian No 11, Jul 86 (signed to press 23 Jul 86) pp 59-63

[Article by Ye. Golub, editor of the large-circulation newspaper of the Automotive Plant imeni Leninskiy Komsomol]

[Text] Mikhail Vasilyevich Kuznetsov, head of two brigades--of fitters and repair workers, and of a creative brigade of rationalizers, which had submitted and implemented 241 suggestions, which had saved the enterprise many thousands of rubles, was being honored at the red corner of the first press production facility of the Moskvich Association. On that day he was being presented an award of the Exhibition of Achievements of the USSR National Economy, consisting of a diploma and a Moskvich car. Suitable speeches were made, welcomed with applause. Kuznetsov was being sincerely congratulated. Everyone here knew, mainly on the basis of personal experience, what a great deal this person--relatively young, age 40, had accomplished to reduce the difficulties facing the collective and to help the plant as it advanced toward its target during the difficult and important period of converting to a new Moskvich model and creating flexible production facilities.

The method of stamping with preliminary stretching of the metal, applied in the shop, was properly assessed here. Although requiring complex technical decisions, the development of new equipment and its difficult tune-up, this had yielded substantial savings of resources, made people and scarce equipment available and improved the quality of items.

Kuznetsov is known to thousands of people at the AZLK. The first thing that a visiting manager of the automotive industry NIIT does is to visit with Kuznetsov. He is also visited by scientists from the Moscow Automotive Engineering and Metallurgical Institutes. One such visitor once said:

"We cannot do without each other: he without science and science without him."

Together, they discuss a number of new production ideas. One of them was the following: What if, before laying it under the press and stamping it, the steel sheet is made almost corrugated? This would eliminate the stress from which a highly stressed metal sometimes splits in stamping. This is quite an important problem to the plant and to the fitters themselves, who must give a

great deal of thought on how to prevent the metal from tearing when stamped. I watched Kuznetsov discussing it, heatedly, interestedly, immediately starting to make sketches....

At the stamping repair shop Kuznetsov's brigade services very important lines in two sectors. It has more work than it can handle, the more so since the equipment is not new. Yet important lining parts for the Moskvich must be stamped in such a way that the conveyer belt will not stay idle and the quality will not decline. However, the brigade has never let anyone down regardless of the difficulty. Furthermore, whereas previously it consisted of 20 members, today it has only 13, who manage to do the same amount of work. Last year alone, in fulfilling a special assignment, in addition to everything else, the brigade was able to repair more than 50 basic stamping machines, which determine the quality of the parts which determine the "face" of the automobile.

What comes to mind when watching Kuznetsov is the that the concept of "conscience" includes another most important aspect: the conscience of the owner. Mikhail Vasilyevich and I have known each other for a long time and every time I see him I relish and think about words he seems to pronounce subconsciously: "my stamps," "in my presses," "this is one of my weak points" (referring to some link in the technological chain of the presses), "I have still not figured this one out," "my boys are still having difficulty here" (referring to the stamping workers who must somehow adapt themselves to an inconvenient stamping operation). He is the owner, in the best meaning of this term and his conscience is troubled when something is not in order with his property.

"Look," Kuznetsov would say, taking me to the bin filled with finished halves of a well-known item to an automobile owner--beams of rear axles for a Moskvich. "We had to cut the steel sheet in three parts to make these halves and a great deal of waste remained. A suggestion was made to change slightly the dimensions of the sheet and to cut it differently and now we can cut each sheet into four parts and there is no waste. Generally speaking, in 10 years we have changed the entire process of making this part, and all related operations. Different punching dies were procured. The result? The number of stamping dies was reduced, we use less people and equipment for this operation, we are conserving materials and no one has complained."

I accidentally overheard a conversation during which Kuznetsov was blaming one of his young comrades for having repaired the stamping die without having made what the brigade leader considered a suitable improvement. "Why make someone nervous? This is our work!" He frequently improves on equipment and tools neglected by designers, adding: "Why do something poorly if you can do it better?"

Traditionally, a rationalization is interpreted as perfecting something, using a more expedient organization. Kuznetsov's example, however, unquestionably confirms that worker rationalization is, above all, a moral category which he considers a basic, a mandatory standard of his work and behavior in the collective.

The stamping of one of the largest parts--the floor panel of the automobile--was undertaken. A large square-shaped piece of metal was wasted by opening the "window" where the gas tank would fit. Why is this? He asked the technologists. He then considered the matter at length and thoroughly sorted out everything needed for this type of operation. He found an item which could be stamped from the wasted metal. However, this required redesigning of the dyes, and step-by-step development of the entire technology, for the part is complex and has a will of its own. Once again we looked at the press. Kuznetsov pointed at the dyes and the parts made with their help:

"We were able to stamp a panel from the discarded part of the metal sheet and from each sheet we managed to stamp out even two panels. With an accurate layout and very careful setting there is no waste whatsoever!"

The man was deeply and happily satisfied. Once again his creative thinking had been displayed and his human "I" has been constructively expressed. Obviously, this is a feeling similar to that of an artist who has succeeded in his creation. Actually, no one was astonished to hear Kulibin, the great Russian mechanic, describe the work of a watchmaker as an art.

Pursuing his thoughts, Mikhail Vasilyevich adds, with equal satisfaction:

"Here we gain time, release equipment and increase the production of parts."

This profound personal satisfaction fully coincides with the interests of the collective and he considers this entirely natural. His conscience as an owner not only does not allow Kuznetsov to sleep peacefully when something in the shop is not in order but also forces him to "pursue" science and practical experience. "A trip to Izhevsk is necessary," he would say to the shop chief and the technologists. "We have trouble, our damper is not working at all, it is making a terrible noise. In our colleagues' plant, I have been told, it is working as smoothly as can be...."

With his comrades, he also visited the VAZ. They went to a repair base and saw how dyes can be rebuilt easily and qualitatively through hot metal spraying. They applied the idea in their own shop. They found a place for the new process in their already small section. Plant technological designers installed a special machine but the machine did not work! The same model, however, was working at the Volga plant. They urged on the designers. Meanwhile, time was being wasted. At that point they decided to master the spraying process themselves, with the help of a special burner. Now Kuznetsov can proudly point at the work of his young comrade, welder Aleksandr Shcherbatykh: "That is how we master advanced technology! This is a splendid thing. Look how evenly and cleanly it sprays the metal on the surface. Previously we had to overlay the seam, after which we had to spend an entire shift in cleaning and completing the operation, particularly in the case of cast iron. Now we are doing all this two-three times faster. The results are substantial and quality has improved greatly."

If Kuznetsov "thinks up something" and aims at something, he will complete it, as everyone knows. He has not retreated even when chances for successes have been minimal.

"I have reached a dead end here," he said sadly, pointing at a part, colloquially known as "the spider" (in an automobile it is the front suspension linkage). "Here, look, in stamping the skirting must be very small and, naturally, the dye chips. We must find out the reason. Generally speaking, technologically this part is unsuitable. Something must be done for the openings to be punched and flanged. In all likelihood, it would be better to combine operations, because flanging becomes easier when done together with punching. But at what point should this new operation be used? This would mean a total of eight operations...could we put it here? No, this will not do...wait a minute, if I do this, if we combine..."

Such is the process of creativity, the birth of an idea developing in front of one's own eyes, and one should see the way the person becomes involved. I do not interrupt, for perhaps it is precisely at this point that he will find the solution to an old problem. We already mentioned the way an illumination comes, as the result of which disconnected observations and guesses sometimes instantaneously find their proper place in a streamlined chain...no, such illumination may only seem instantaneous, Kuznetsov believes. One must feel, one must be familiar with the structure of a metal, a part. Sometimes, he says, in the same batch of rolled metal, the same smelt the grain in a metal sheet will be along the length and in another along the width. Who knows how it will behave when punched.

"...Yes, one must know how properly to measure and estimate," Kuznetsov goes on as he continues to think about the "spider." He will use the electronic calculator, ask technologists, as he frequently does, and turns for help to the plant computer; he will send the metal to the laboratory and will make his own computations. In other words, he will use the applied value of sciences which today drives technical progress forward. This, however, has yet another side: such sciences, as our scientists point out, are not only of applied but also of absolute value, meeting the spiritual needs of the person.

Yes, Kuznetsov is pleased by his research and creative work. This is no longer accidental but more of a pattern for the modern worker. His happiness is complete, however, as he admits, when "you look around and something has been improved thanks to your efforts."

Naturally, this is not spontaneous creativity. It is a thought-out, a purposeful process which develops also as a consequence of a broad social outlook. For example, everyone deemed it natural for Kuznetsov to become a member of the party committee of the production facility which combines eight shops. His activeness in such social work was equally natural. In precisely the same way he is actively interested in having everyone meet his obligation of working no less than 3 days on the reconstruction of the enterprise during his free time, a reconstruction which also involves sociocultural projects. His brigade was among the first to set the example of conscientious work in erecting the new buildings.

The brigade can be relied on even when the situation calls for exceptional efforts. Should a breakdown occur and an urgent repair of the equipment become necessary, no one complains of difficulty or fatigue. The brigade leader remains in the shop during the evening and throughout the night,

together with one or two comrades, or the entire brigade, which has never let him down yet. Sometimes not even extra hands are needed. The people have simply realized that an optimal solution can be found faster when they work together.

It is an old truth that one head is good but two (not to say seven) are better. Officially, in the documents of the plant's VOIR Council, these people are known as the "Creative Comprehensive Brigade Headed by M.V. Kuznetsov." This is his second position, assumed voluntarily. It consists of six fitters, all of them younger than the brigade leader, and Sergey Zhukov, the technologist, who is in charge of most of the strictly engineering and organizational work, such as checking the calculations, drawing proper designs, coordinating the results with the designers and obtaining the approval of the authorities.

Unfortunately, many rationalizers are familiar with the occasional difficulty of "opening the way" for their ideas. Kuznetsov and his comrades have no reason to "open such a way." From the initial concept about an improvement to the finished item expressed in metal and even the testing of the new development are all part of their work. Sometimes by the time the plant's management would be getting around to considering a suggestion formulated by the brigade and coordinations "on the higher levels" would be only beginning, the idea of the innovators would have already been implemented, work would proceed according to the new development and results would already be achieved.

No one recalls a case of discarding a collective suggestion. Nor does the plant's management recall any possible rejection, since each suggestion has been properly worked out and all preliminary work done by the brigade itself.

One of the functions of the creative brigade is practical cooperation in implementing ideas of rationalizers who are not its members. Such work is also taken into consideration and encouraged. Nevertheless, I took risked asking Kuznetsov the following: Are you more likely to give a "green light" to suggestions made by your own brigade? He smiled:

"What is the difference? The benefit is common. Furthermore, I am chairman of the shop's VOIR Council and it is in our interest to implement as many suggestions as possible. To the contrary, sometimes we must go after someone who has had a practical idea."

At this point he was being modest or, more precisely, he was not describing his actions quite accurately: he does not urge anyone but, as I was told by many innovators, he takes up the idea firmly and enthusiastically, helps to develop it, suggests practical solutions or, in a word, becomes "contaminated" by it and is not "cured" until the idea has assumed a specific tangible shape in metal.

At home, Kuznetsov "drafts" his suggestions usually in the kitchen, when the rest of the household has gone to bed and one can compute a new part or piece to be inserted in the dye and consider take all "consequences" calmly, while the household is silent. The computations are not simple for most frequently

they involve the use of already existing equipment and the introduction of new elements in existing designs. He learned this kind of serious approach to the work a quarter of a century ago, in one of the oldest vocational schools in Moscow, which trained cadres for the famous Krasnyy Proletariy. Real metal workers were raised in that enterprise. The foreman would take the apprentice to the emery and make him carefully grind the metal and look at the flying sparks, which came out as bright little stars, in a thick golden stream or a cluster, on the basis of which the "heart of the iron," its structure and possibilities could be determined. And as you grind the part, follow the templet most strictly. Take the trouble of taking yet another measurement and put things in their place. Kuznetsov then went to night technical school, for mastery of the craft, even though like a virtuoso, also was obviously insufficient to satisfy his need for creative work. The 4 years spent operating a press at the AZLK, where he went to work after his army service, proved to Mikhail how much had to be done to improve, to change things which had taken decades to develop in this difficult type of work, and make the work both more efficient and easier. Observations and ideas piled up and demanded an outlet and, becoming a fitter, Kuznetsov not only was burning with the impatience of correcting what was hindering the work of the press operators but also of sharing this interest with others.

Unquestionably, the brigade leader has developed a beneficial "power field." In his presence it is simply impossible not to experience the effect of his creative charge, his inordinate aspiration to correct someone's sloth or awkwardness. What is striking is his amazing surface calm. Tall, strong, without vanity, he does nothing "on the run." Thoroughness is what distinguishing the work of this creative collective.

A new press facility appeared at the plant, needed for the production of a new car model. Here as well the former members of his creative brigade, continuing its traditions, show their worth. Kuznetsov is pleased that Mikhail Puchin, their comrade, who has properly mastered automated press lines, was able quickly to find a common language with the assembly men and the tuners of these lines, who came from the GDR, and to formulate some practical suggestions as the equipment was being set up. The suggestions were supported by another alumni of Kuznetsov's brigade, Nikolay Razumilov (2 years ago Mikhail Vasiliyevich had recommended him for party membership), who was elected party secretary of the new shop....

Currently the plant has 41 creative brigades. Kuznetsov's is among the best. The brigade leader and his comrades have many creative plans, including some which may not seem to be part of the direct obligations of production workers but, which, unquestionably, are quite needed by them, by the plant and by society.

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SOCIAL POLICY, DEMOCRACY, SELF-GOVERNMENT

SOCIAL RECONSTRUCTION OF THE COUNTRYSIDE

Moscow KOMMUNIST in Russian No 11, Jul 86 (signed to press 23 Jul 86) pp 64-75

[Article by P. Grishkyavichus, first secretary of the Lithuanian CP Central Committee]

[Text] The April 1985 CPSU Central Committee Plenum classified social problems, everything which affects man, his work, rest, and well-being as key problems of party policy. All aspects related to them were considered in a Leninist principle-minded, exigent, constructive and profound fashion at the 27th Congress. "It is precisely in this area," the CPSU Central Committee political report noted, "that the results of economic activities affecting the vital interests of the working people are implemented and the high objectives of socialism embodied."

In adopting a comprehensive approach to the implementation of the congress' stipulations in the area of social policy, the Lithuanian party organization intends to pay the greatest possible attention to the further development of the countryside. For quite some time life itself has made it necessary to take a new look at this problem. In this case the lag in the material base of rural sociocultural life and economy began to turn into major losses by slowing down the growth rates of agricultural output. The dissatisfaction of the rural workers with working and, particularly, living conditions, which were greatly worsened by the system of village settlements inherited from the old social system, intensified even further the people's lack of interest in living and working in the countryside. There was a mass migration by the people, the young above all, to the cities.

Whereas it is extremely expensive to bring modern social conveniences to each rural family dispersed among distant farmsteads, accomplishing this on a broad scale is simply impossible. Consider the high cost, for example, of rural electrification, which was completed toward the end of the 1960s, a time when the farmstead system had remained virtually intact?! This led to tangible changes in farmstead life but, as a whole, naturally, the problems were not entirely solved.

The farmstead settlements became the most serious obstacle to improving the working conditions of the farmer and increasing his productivity. The farmsteads splintered the fields, and hindered the reclamation of excessively

moist land and the efficient utilization of modern agricultural equipment and of a crop rotation system.

Briefly, the party organization faced most urgently the socioeconomic problem of resettling the rural population from farmsteads to kolkhoz and sovkhoz settlements. Essentially, this meant a radical reorganization of the countryside and the building of new, modern villages. Understandably, such a vast and difficult problem could not be solved in one fell swoop. It required huge funds and material resources and the economic strengthening of the public farms of kolkhozes and sovkhozes, a corresponding level of well-being of the farmers and, unquestionably, the adoption of a comprehensive planned and scientific approach to the problem.

Time was short and energetic action was urgently needed. The first steps in the planned reorganization of Lithuanian villages were made in 1958. It was then that the initial rayon planning systems were drawn up. Accordingly, the number, size and boundaries of kolkhozes, sovkhozes and other state farms and the number, dimensions and location of rural settlements were determined for each rural rayon. The subsequent consolidation of farms and their production subdivisions required such plans to be refined and redrafted. The new plans called for the creation of farm production centers of kolkhozes and sovkhozes and the concentration, specialization and interfarm cooperation.

The decade which followed the March 1965 CPSU Central Committee Plenum became a period of strengthening the economy of Lithuanian kolkhozes and sovkhozes. The level of intensification of agricultural production increased. It became possible to allocate more funds for the development of the rural social infrastructure. In this connection, in 1977 and 1978 the rayon planning system had to be expanded by adding to the rural settlements social and cultural projects, such as general education schools, preschool children's institutions, houses of culture and clubs, stores, cafeterias, etc. It is thus that an integral program for the reorganization of the republic's countryside for the period until 1990 was drawn up.

The reorganization of our countryside was substantially speeded up as a result of these steps. Whereas in the first 20 years after the war (1946-1965) no more than some 59,000 individual housing units (apartments) were built, their number nearly doubled to 110,500 in the next 20 years (1966-1985). About one-half of the farmsteads subject to dismantling were closed down and currently more than 66 percent of the rural population already lives in settlements. The reorganization of the countryside was carried out at a faster pace thanks to the great state help to the rural residents. Starting with 1967, citizens who move from farmsteads to settlements, above all to those farming reclaimed lands, are compensated for the loss of their buildings and fruit trees out of budget funds. At the same time, state loans to the new settlers were increased. Kolkhozes, sovkhozes and other state farms were later allowed to build individual houses for their workers, for which the owners had to pay no more than half the assessed cost of the new farmstead. The standards and rates applicable to public housing were extended to the new construction.

The intensive building of individual and cooperative housing required a corresponding internal planning of the rural settlements. As early as 1972

all central farmsteads of kolkhozes and sovkhozes were built on a planned basis. In an effort to avoid monotony in construction, and to ensure better architectural quality, based on the requests of the farms the design institutes developed the layouts for the future settlements on a district-by-district basis. They called for streets and byways, engineering facilities, landscaping and greenery. This has enabled us, of late, to build comprehensive rural residential districts, i.e., according to the principles used in urban construction.

However, as is the case with any new major project, errors and blunders occurred in the reorganization of the countryside. The initial concept which dominated construction was for each crop growing brigade of a kolkhoz or sovkhoz department to have its own settlement. Actually, at the time that these subdivisions were being planned and set up as comprehensive economic units this viewpoint was justified, for the rural working people settled close to their place of work. Reality, however, refuted the concept. It proved both impossible and inexpedient to develop a social infrastructure in the small settlements, and to provide them with all amenities needed for the satisfaction of daily sociocultural needs. The situation was worsened by the subsequent consolidation of kolkhozes and sovkhozes, the conversion from the territorial to the sectorial principle of production organization and management and the fact that many farms rejected the system of comprehensive brigades and sections. This resulted in the appearance of the category of so-called settlements without a future, in which the rural population does not want to live. Here new construction has been stopped. However, closing down such settlements and, once again, resettling the people would be an impermissible luxury and waste.

Starting with the middle of the 1970s, new housing and sociocultural construction has been taking place essentially in the central farmsteads of kolkhozes and sovkhozes. It is only in exceptional cases, if so requested by the local population, that such construction is allowed in the centers of the old and the subsequently consolidated farms.

Economists, designers, architects and other specialists expressed different views as to what type of housing to build in the countryside: apartment or multi-storied or single-premise housing of the farmstead type. The decision was left to those who were to live there. The new settlers favored single unit farmstead houses which are most consistent with the way of life of the peasant and old traditions. It is true that the cost of such housing is somewhat higher than that of a multiple-apartment residential building. However, additional investments are compensated with output from the auxiliary farms, which not only meet the individual needs of the farmer but also are a substantial addition to state food resources. In order to create the most favorable possibilities for the development of the private plots, the lots allocated for the new farmsteads were increased to 0.25 hectares; furthermore, pastureland nearby and hay allocations were granted. Brick or panel housing was built essentially with separate central heating and other communal conveniences and basements for storing potatoes, vegetables and fruits and installing the heating furnaces. Furthermore, each house is delivered with its farm outbuildings. It is no accident that 83 percent of workers and employees in rural areas now raise cattle and 75 percent of them have cows.

In an effort to provide variety and architectural expressiveness, and to meet the various tastes of the clients, designers and architects are steadily adding new designs to their rural housing catalogues.

The 11th 5-year period became a major step in the reorganization of the Lithuanian countryside. Taking into consideration that socioeconomic progress in the countryside is a set of interrelated factors, the 18th Lithuanian CP Congress, which was held in 1981, emphasized the urgent need for the adoption of a comprehensive approach to solving basic social problems. Particular attention was paid to the accelerated development of the sociocultural infrastructure as the most important prerequisite for improving the adversely developing demographic situation in the countryside. The congress set as a priority task the building of general education schools and preschool children's institutions, culture houses, clubs and sporting facilities and maximally expanding the network of cafeterias and medical and consumer service centers in all farms.

The initiative of the rural working people of Pasvalskiy Rayon, supported by the Lithuanian CP Central Committee, played a major role in this respect. In 1980 they appealed to the republic's farmers to build a children's "kindergarten-nursery" combine in each farm during the 11th 5-year period. Let us note that the people of Pasvalskiy Rayon kept their word: by the autumn of 1984 all rayon farms had their own children's preschool institution.

New and more favorably opportunities for solving problems of rural social development appeared after the May 1982 CPSU Central Committee Plenum. The kolkhoz and sovkhoz economy strengthened and farming began to be profitable. Net income increased. The possibility appeared of assigning more funds to the nonproduction sphere, thus providing the people with the most favorable working and living, therefore enhancing even further the role of the human factor in the implementation of the Food Program. A Lithuanian CP Central Committee special plenum took place in the summer of 1983 in Panevezhskiy Rayon, at which problems of the social reorganization of the countryside, upgrading its production and living standards and retaining cadres were solved in a thought-out, energetic and comprehensive basis. The work done was profoundly and comprehensively analyzed at the plenum; shortcomings and blunders were exposed and steps for their elimination were earmarked.

A serious discussion was subsequently held at party committee plenums and meetings of the party aktivs in rural rayons and at primary party organizations of kolkhozes and sovkhozes. A specific program for the further accelerated development of housing construction and the social infrastructure, for improving working and living conditions and cultural services and retaining the people, young people in particular, in the countryside, was formulated in each farm.

By that time economists had made detailed studies of ways of forming and utilization of basic nonproduction capital as the material foundation for solving social problems for 612 kolkhozes or approximately one-half of all republic farms. It was obvious that the extent to which such facilities were available directly influenced the stability of farming collectives and manpower resources in general. In farms where basic nonproduction assets per

hectare of farmland were worth less than 100 rubles, the annual decline in the number of able-bodied kolkhoz members had reached 3 percent over the 10th 5-year period, or triple the indicator of manpower drain from the farms where such assets exceeded 200 rubles per hectare of farmland. Thus, the number of working people at the Pilyakalnis Kolkhoz, Kupishkskiy Rayon, where basic nonproduction assets per hectare of farmland averaged 232 rubles in 1981, had even increased somewhat. In the neighboring Venibe Kolkhoz, where such assets averaged 98 rubles per hectare, the number of able-bodied kolkhoz members had declined by an average of 5 percent annually. An almost identical situation could be noted virtually everywhere. The task was set of giving priority to increasing basic nonproduction assets compared with production assets as a whole for the republic, particularly in rayons and farms which were lagging in their socioeconomic development. We were able substantially to improve the situation in the past 5-year period. Whereas basic production assets for agricultural purposes were 33 percent higher in 1985 compared to 1980 for all kolkhozes and sovkhozes, nonproduction assets had increased by 81 percent. Consequently, nonproduction assets had been increasing by a factor of almost 2.5 compared to the growth rates of production assets. Last year basic nonproduction assets per hectare of farmland in the republic's kolkhozes and sovkhozes averaged 424 rubles, or higher by a factor of 3.4 compared to 10 years ago. In only two of the 44 rayons they were still under 200 rubles.

What does this represent in physical terms? During the 11th 5-year period a total of 3 million square meters of general housing area or 32,700 housing units (apartments), 550 kindergartens and nurseries, 265 cafeterias, 308 public baths and many other sociocultural projects were built in the countryside; 990 kolkhozes and sovkhozes of a total of 1,042 are already equipped with children's preschool institutions; 1,000 farms have cafeterias and 969 have houses of culture or clubs. All farms have general education schools, medical centers and centers for population consumer services.

A great deal has been done to improve the amenities of central settlements and to provide housing with communal facilities; 87 percent of the settlements have asphalted streets, 95 have water mains and 64 percent have sewers. In the central settlements 46 percent of houses or apartments have running water and 40 percent are connected to the sewer system.

The aspiration to give each village its specific aspect has become a good tradition. Under the guidance of the party organizations, the local soviets of people's deputies, trade union committees and women's councils in kolkhozes and sovkhozes have sponsored competitions for the best rural farmstead for a number of years. For more than 20 years, every year the republic committee of the agricultural and procurement workers' trade union (today agroindustrial complex workers) has sponsored together with the newspaper TIESA annual republic reviews of the urbanization of rural settlements and improvements in their appearance. Prizes at such reviews have already been awarded to 147 republic farms. Currently this movement is being joined by the collectives of other APK enterprises and organizations located in rural areas.

The appearance, the overall view of Lithuanian villages, has substantially changed in the past decade. Many of them have become neater, more modern and more attractive. The development of a number of kolkhoz and sovkhoz

settlements earned union-wide recognition and high ratings. The USSR State Prize was awarded to the Daynava settlement of the Order of the Labor Red Banner Leonpolis Poultry Sovkhoz, Ukmergskiy Rayon; the USSR Council of Ministers Prize was awarded to the central settlements of the Zhelesvyale Kolkhoz, Kapsukskiy Rayon, and the Truck Gardening Sovkhoz imeni I. Michurin, Yurbarkskiy Rayon. Twenty-two farms were presented with diplomas of the USSR VDNKh for buildings and landscaping. The settlements of the kolkhozes Pyargale, Ionishkskiy Rayon, Raudonoyi Velyava, Shyaulyayskiy Rayon, Ritu Aushra, Kedaynskiy Rayon, and many others offer convenient living amenities and please the eye with their modern architecture and organic blending with the landscape.

I would like to single out the Kolkhoz imeni 25 Syezda KPSS, Shilutskiy Rayon, among farms whose party organizations and managers are most profoundly interested in energetically, and I would even say with enviable taste, solving problems of social reorganization. The old farmsteads which could be found in the center of the farm until recently have been replaced over the past decade by a beautiful settlement for 1,400 people. The settlement has a secondary school for 380 students, a nursery-kindergarten for 90 children, a commercial center with cafeteria and a coffee house, a culture house with a hall with 350 seats, an outpatient clinic and a communications department. An originally designed building stands in a picturesque area--the preventive treatment hospital for sovkhoz workers. The houses in the settlement are primarily for single families. However, this does not make the farmstead monotonous in the least in terms of architecture, landscaping and greenery. The neat farm outbuildings of each house do not detract from the appearance. A newly laid out park with ponds, grass and flower beds covers about 200 hectares. All of this, together with contemporary engineering facilities, is attracting the young people. Concern caused by manpower shortages is a thing of the past. Every year as many as 20 marriages are celebrated at the farm and more than 60 percent of the workers are young people under 30.

Panavezhskiy Rayon set the general example. As early as 10 years ago, the party members in the rayon undertook the comprehensive, planned and systematic implementation of a program for the village's economic and social development. Rallying the efforts of the council of the agroindustrial association, the deputies of the local soviets, farm managers and specialists, and primary party, trade union and Komsomol organizations, within a short time the party raykom was able to achieve a great deal in promoting the comprehensive mechanization of the production process and developing not only production centers but also kolkhoz and sovkhoz settlements. These steps contributed to the fact that despite extremely adverse weather conditions which prevailed in the second half of the 10th 5-year period, the average annual agricultural output in Panavezhskiy Rayon farms increased by nearly one-third, compared with no more than 4.5 percent on an average for the republic. Even then the number of the able-bodied population in the rayon was not only stabilized but began to increase. This trend was consolidated during the 11th 5-year period.

Problems of improving the working and living conditions of the rural workers and upgrading farming standards and efficiency are being successfully solved today in rayons such as Pasvalskiy, Kaunasskiy, Kedaynskiy, Kretingskiy, Skuodasskiy, Shalchininksiy, Shyaulyayskiy and Varenskiy.

Substantial positive changes were made thanks to the timely measures which were taken, above all with the major trend of social construction, that of ensuring more favorable living conditions for young families. A preschool children's combine, a general education school and, naturally, a comfortable apartment are the main attractive factors without which young people cannot be retained in the villages, not to mention recruiting them from elsewhere. These steps were not slow in affecting the demographic situation. Encouraging trends appeared in the structure of the manpower in agriculture in the past 5-year period. It increased somewhat (by 1.4 percent) and, compared with 1980, the number of young working people increased by 16,000, or 33 percent.

However, these changes do not provide even the slightest reason for complacency and relaxation. On the contrary, by proving the accuracy of the course which was charted, they indicate the expediency of and need for the comprehensive intensification and improvement in the work initiated for the reorganization of the countryside, with twice the energy and persistence. The resolutions of the 27th CPSU Congress and the party's course of accelerating the country's socioeconomic development direct the republic's party organization and all rural working people precisely toward this goal. In the new 5-year period we have the task of doubling the pace of development of agricultural output. We can solve this difficult problem only by properly combining efforts for the application of scientific and technical progress and, on this basis, perfecting the production process and its efficient utilization, and ensuring further improvements in the working and living conditions of the rural working people and upgrading their labor and social activeness. Unquestionably, the 12th 5-year program for expanding the construction of housing and sociocultural projects in the republic's kolkhozes and sovkhozes will contribute to increasing the efficiency of our efforts.

The accelerated comprehensive solution of problems related to the social reorganization of the countryside will require improvements and, in a number of farms and individual rural rayons, radical changes in investment policy. It is a question of the possibility of resolving, once and for all and within the shortest possible time the problem of establishing a proper correlation between the degree of availability of basic production and nonproduction assets in kolkhozes and sovkhozes or, in simpler terms, between labor conditions, on the one hand, and social and cultural conditions, on the other. It would be difficult to express this correlation in terms of numbers. At the present time disparities in the availability of basic production assets among republic rayons may be as high as 100 percent; in the area of nonproduction assets, it may even be triple that figure. However, as practical experience has indicated, all other conditions being roughly equal, the problem of intensifying agricultural production and upgrading its efficiency can be solved more successfully with a more interested and planned approach to social problems and if relatively more funds are assigned for such purposes, thus increasing the availability of nonproduction assets. It is true that for the time being no farm, not to say rayon, in our republic has totally solved the problem of developing material production facilities. Despite this, however, it is entirely clear to us that in most of our kolkhozes and sovkhozes we must develop above all the nonproduction area. It is precisely its lagging that led, among others, to the fact that the increased fleet of new modern equipment and the building of good quality animal husbandry structures failed

to yield desired results, for the constant lack of skilled specialists or even simple manpower blocked their utilization.

Unfortunately, not all rayon and farm managers and not all party organizations were able to address themselves to the social needs of the rural workers; awareness of the need for the accelerated reorganization of the countryside has still not reached everyone. Let me cite one example which made us think profoundly and draw proper conclusions: for a long time Prenayskiy Rayon was considered economically strong. Its party raykom, rayon executive committee and agricultural management had skillfully structured their economic work in kolkhozes and sovkhozes and taught managers and specialists how to assess, preserve and increase public property. Even during the difficult period which preceded the May 1982 CPSU Central Committee Plenum, the rayon had no losing farms. Many of its farms had been able to accumulate funds, for which the rayon was rewarded republic red challenge banners and bonuses. No one was interested in the way the rayon handled its income and expenditures. It turned out that the socioeconomic development of many farms had become one-sided. Within a 10-year period the rayon advanced from the 27th to the 14th place in the republic in availability of basic production assets per hectare of farmland; in terms of nonproduction assets, it was last. Most farms faced the problem of manpower shortages. Urban residents had appealed to the managers of such farms for work as mechanizers and animal husbandrymen. However, seeing that they had nowhere to live in the villages and that the villages had no amenities, they left for areas which were better in this respect, although working conditions may have been worse. Currently the situation in the rayon is being corrected. However, time has been lost and great additional efforts will be necessary to catch up.

A similar disparity between sociocultural life and labor conditions of rural workers may be noted in Lazdiyskiy, Alitusskiy, Vilnyusskiy, Trakayskiy, Telshyayskiy and Zarasayskiy Rayons. This is a bitter lesson which should be learned in full by the party, soviet and agricultural managers not only on the rayon but also the corresponding republic levels. This applies, above all, to the Lithuanian CP Central Committee departments, which failed to ensure proper control over the implementation of decisions relative to the social development of the countryside.

The building of kindergartens and nurseries, cafeterias and other social projects must be completed in all farms in the next 2 years; that of houses of culture must be completed by the end of the 5-year plan; the main streets of the central settlements of kolkhozes and sovkhozes must be asphalted and their communal facilities must be increased. According to a decree which was recently passed by the Lithuanian CP Central Committee and the republic's Council of Ministers, between 1986 and 1990 170 children's preschool establishments, 140 cafeterias, 134 houses of culture and clubs, 210 rural service houses, 114 reception centers for consumer services, 135 public baths, general education schools, rural outpatient clinics and other projects must be built in rural settlements.

Today our main attention is concentrated on developing housing construction. In the last 5-year period an average of six house buildings or apartment units per year per farm were built; however, this did not meet growing needs. An

increasing number of people expressed the desire to move to the countryside and dedicate themselves to the noble task of grain growing. The task of increasing housing construction arouse in its entire magnitude. This called for drawing on all possible sources of funds and resources, building housing on an individual basis and by the people themselves, and more actively involving in this work contracting construction organizations.

We were able to overfulfill the 11th 5-Year Plan for the construction of housing financed from state and kolkhoz funds. We must admit, however, that not all possibilities were harnessed, as the result of which some rayons did not fulfill their plans for the building of individual and cooperative housing financed out of population funds. Frankly speaking, the scarcity of construction materials and increased retail prices of such materials had an adverse effect in this case. Problems of providing construction materials to individual house builders from centralized sources were not solved satisfactorily everywhere. We were unable properly to expand housing construction through contracting. Over the past 20 years contracting organizations have accounted for no more than 14 percent of the entire housing completed in rural areas. So far, the construction workers of the republic's Gosagropromstroy have given priority to assembling prefabricated panel housing, whereas the more labor intensive building of brick-made housing, which is more durable and, therefore, preferable for the rural population, was carried out by the farms and individual builders. The republic's Ministry of Construction contracting organizations have built a great deal of housing in the cities and are successfully fulfilling their plans and ensuring good work quality. Essentially, however, they have undertaken house building in rural areas, although, as we know, a governmental decision to this effect already exists. Much work remains to be done to improve standardized designs for farmstead-type housing. The Gosstroy and Gosagropromstroy design organizations have been instructed this very year to design more economical, reliable and durable homes to be built by Gosagropromstroy enterprises.

A total of 32,000 new housing units (apartments) will be built during the 12th 5-year period. By energetically solving problems and eliminating shortcomings and omissions we hope to accelerate the renovation of our villages and not only to fulfill but to overfulfill the planned program for housing construction. By the end of the 5-year period such settlements should house some 70 percent of the rural population.

Work is continuing on the development of communal facilities and on rural urbanization. We are planning to implement a program for experimentally building local and group engineering systems involving more advanced and economical heat, water and sewer facilities and the treatment of sewage waters. Every year 260 kilometers of water mains will be laid. We are planning to asphalt the streets of 273 central settlements of kolkhozes and sovkhozes. All of this, added to well-organized sanitation engineering services and the electrification of the new housing is being carried out essentially by the contracting organizations of the Gosagroprom.

At the start of the last 5-year period the republic adopted a comprehensive program for road construction, which includes the reconstruction of old and the laying of new roads in the countryside, totaling 35,000 kilometers. In

the last 5-year period we laid nearly 6,000 kilometers of paved road. Currently they extend to all farms and the majority of production centers. The designing and building of such roads were carried out by the republic's Ministry of Land Reclamation and Water Resources and the Ministry of Motor Transport and Highways. The new 5-year plan calls for laying another 10,000 kilometers of rural roads. We admit that much more could have been done and the need for further work is quite urgent, particularly in the case of intrafarm roads. The farms themselves could also build, repair and maintain such roads and this is precisely what some of them do. However, the solution of this problem on a broader scale is being hindered by the great scarcity of road building machinery, particularly road graders. How can there even be a question of the individual farms, if even the needs of the republic's Ministry of Land Reclamation and Water Resources itself are met by less than half: only 100 of the 230-250 road graders that are needed are available.

The development of auxiliary industries in kolkhozes and sovkhozes is scheduled to play an increasing role among the many factors related to the social reorganization of the countryside, favorably influencing the retention of manpower in rural areas. A well-planned organization of auxiliary industries enables us, as practical experience convincingly proves, to put an end to seasonal employment in the countryside and provide work for women, above all for mothers of large families, which, in the final account, favorably influences the enhancement of population living standards. On the other hand, auxiliary industries are a major source for additional kolkhoz and sovkhoz income. Last year, auxiliary production shops and industries engaged in the manufacturing of industrial and consumer goods were operational in 158 kolkhozes and sovkhozes, i.e., in 15 percent of all farms. They employed nearly 6,000 people, including some 4,000 women. They added 70 million rubles' worth of income and 20 million rubles' worth of profits to the farms.

The most expedient areas in the development of auxiliary industries became apparent. The most important among them is processing agricultural commodities and raw materials, fruits and vegetables above all. Many farms are installing and already running fruit drying and juice extraction shops; they are preserving vegetables, producing canned fruit and vegetable goods and nonalcoholic beverages and other types of preserved foodstuffs.

Cooperation, on a contractual basis, between farms and industrial enterprises in the production of complementing items and simple consumer goods is developing increasingly. Such activities are mutually profitable: it becomes easier for the farms to acquire the necessary equipment and raw materials and to market their finished products; the industrial enterprises find it much less expensive to develop jobs in the countryside than in the city, for this requires no additional housing construction.

The main benefit, however, is ending the outflow of manpower from the villages. Here is an example. An auxiliary production shop, which has been in operation for the past 15 years at the Kolkhoz imeni F. Dzerzhinskiy, Vilnyusskiy Rayon, has produced a variety goods from industrial waste, marketed by the state trade system on the basis of contracts. The shop employs 107 people, 99 of whom are women. It shuts down during periods of intensive farm work when everyone goes to work in the fields. It is no longer

necessary to seek the help of urban residents. Equally important is the fact that the shop produces and markets goods worth up to 1.5 million rubles annually. Whereas in the past many able-bodied kolkhoz residents commuted to work in the republic's capital, 60 of them remained to work in the shop after it opened and, subsequently, many of them joined the kolkhoz, mastering the skills of milkmaid or mechanizer, for earnings in these skills are higher than in the auxiliary production shop. Furthermore, the young people were given incomparably greater opportunities for organizing their own lives and setting up families.

Briefly, a weighed and sensible approach to the development of auxiliary industries and production facilities in kolkhozes and sovkhozes is of major socioeconomic significance. Taking this into consideration, we gave the republic's Gosagroprom the task of organizing shops for the processing of agricultural commodities and industrial production by-products in all farms where this was possible.

Improving the resting conditions of rural workers and the restoration of their health and ability to work is a matter of constant attention and concern of party and trade union organizations and soviet and agricultural agencies in the republic. The principles governing our way of life and social justice demand that the grain growers enjoy in this respect opportunities equal to those available to working people in other production areas. The Lithuanian Republic Association of Interkolkhoz Health Centers--one of the first organizations of its kind in the country--has been operational for nearly 20 years. Within that time three sanatoriums for 1,225 people, four boarding houses and rest homes for 2,680 people and four pioneer camps for 1,160 people were built in the resort areas of the republic through joint contributions of kolkhozes, sovkhozes, other enterprises and organizations within the agroindustrial complex and from the centralized kolkhoz social insurance fund. Here the rural workers and members of their family are treated and can rest.

Skilled medical personnel are in charge of treatment and prophylactic work in sanatorium-resort establishments. Such work is coordinated by a method council consisting of noted scientists and experienced physicians in the republic, who provide necessary consultations on a steady basis. Last year 46,000 rural workers and members of their families visited the association's health centers for rest and sanatorium treatment; more than 205,000 people used these facilities during the 11th 5-year period.

The 12th 5-Year Plan calls for the further development of material facilities for the recreation and sanatorium treatment of rural workers. By the end of the 5-year period 58,000 people annually will be able to rest and strengthen their health in sanatoriums and rest homes of the association. Incidentally, the association also collects funds contributed by kolkhozes for the construction of rural outpatient clinics. In the past 10 years such funds have been used to build 55 outpatient clinics; another 30 will be built during the new 5-year period.

It would be erroneous to assume that problems of development of the agroindustrial complex, the intensification of agricultural output and its increased efficiency can be successfully solved only by urging on the

nonproduction area, i.e., by creating favorable sociocultural conditions for the rural workers. That is why the republic pays the closest possible attention to improving their working conditions. A great deal has been done in this area. In the past 5 years alone the power-labor ratio in Lithuanian agriculture increased by 31 percent, reaching at the beginning of this year 48.2 horsepower per working person. The growing of grain and silage crops and potatoes has become totally mechanized; virtually all work in the cultivation and harvesting of sugar beets, fodder root crops, and flax and the procurement of hay, haylage and silage have been mechanized.

The application of the achievements of scientific and technical progress in animal husbandry, which is the leading agricultural sector in the republic, has resulted in profound economic and social changes. Today 59 percent of premises for cattle, 83 percent for hogs and 91 percent for poultry are entirely mechanized. They have become real factories where heavy manual labor has been almost entirely eliminated and where productivity has increased manyfold. Evidently, this has made animal husbandry much more attractive.

However, such a situation has by no means been attained everywhere. There still are farms without comprehensive mechanization of animal husbandry, where a number of operations are still performed manually. Will any young and educated person willingly take such jobs? Yet if we look more carefully around us, even in comprehensively mechanized premises we come across not only physically but also morally obsolete and underproductive equipment. And what a great deal of trouble is caused to farm managers, engineers and mechanizers in animal husbandry farms by unreliable mechanisms for the removal of the manure and the distribution of fodder! Blame addressed to designers and scientists who offer rural workers imperfect milking equipment is being heard increasingly loudly and is entirely justified. No improvement have been made in such equipment for decades. However, if even the most productive cows become sick and must be written off in large numbers, the simplest thing is to blame the milkmaid although the fault may be found in the faulty equipment.

Nor could we consider sufficient the level of mechanization in crop growing. Let us consider the tractor, which is the basic power unit. Whereas currently three mechanizers are needed to operate a DT-75 caterpillar tractor, a single mechanizer can run the K-701 model. Today, when nearly four-fifths of excessively moist land has already been drained and crop rotation fields have been consolidated, such powerful equipment could be used almost everywhere in our republic as well. However, it is in short supply. The farmers are also short of more productive hay harvesting machines. The conventional wisdom is that the problem of comprehensive mechanization in potato growing has been solved. However, we are still unable to harvest the potatoes without the manual labor of many thousands of people. The currently produced potato harvesting combines can be successfully used only on flat areas, i.e., where no potato is cultivated on a large-scale in our republic. Such combines are useless on slopes. Yet it is precisely in such farms and areas that industrial potato growing is concentrated in our republic, because the soil here is the most suitable. Let me not mention the grain harvesters produced today, which cannot be used at all without special adjustments. The rural mechanizers are impatiently awaiting harvesters of the Don family.

Perfecting the production process and reducing the amount of manual operations are inconceivable without the proper training of cadres in the mass skills. Contemporary equipment and mechanisms objectively require higher service standards and highly skilled tractor and combine operators, animal husbandrymen and other specialists. As early as 1980 the Lithuanian CP Central Committee and the republic's Council of Ministers formulated a set of measures aimed at improving the availability of manpower for agriculture and keeping young people in the countryside. The role of vocational-technical training is increasing, as a forge of cadres practicing mass skills in the countryside. In order for the children to be able to attend school closer to their homes and carry out their production training in their native areas and, after SPTU graduation, return here for permanent work, the decision was made to open such schools in each rural rayon. Currently there are 32 PTU specializing in agriculture, in 29 of the republic's 44 rayons, 15 of them in rural areas. The range of skill training they offer has been broadened and girls are given the opportunity to select their professions. They can learn not only traditional skills, such as machine milking, hog breeding or poultry breeding, but also truck and flower gardening, apiculture, grain warehouse operations, and secretary-typing, as well as some skills in the social area, such as cook, beautician, seamstress, etc.

Another topical problem is supplying kolkhozes and sovkhozes with higher skill specialists. In the past 5-year period the training of such specialists in the republic's agricultural VUZs was somewhat increased. Clearly, however, it is still insufficient.

The party ascribes prime importance to the exercise of an active and integral social policy and to the persistent implementation of the programs for the enhancement of the people's well-being during the 12th 5-year period and beyond it. The Lithuanian working people, like all Soviet people, consider support of this policy through their dedicated toil and the dedication of all their efforts to its implementation their personal commitment.

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IN THE SOCIALIST COUNTRIES: EXPERIENCE, ACHIEVEMENTS, PROBLEMS

COMPREHENSIVE PROGRAM OF OUR DEVELOPMENT

Moscow KOMMUNIST in Russian No 11, Jul 86 (signed to press 27 Jul 86) pp 76-84

[Article by Josef Lenart, CPCZ presidium member, first secretary of the CP of Slovakia Central Committee]

[Text] Our party's 17th congress will unquestionably assume an especially important place in our party's history. Its particular role in the life of the CPCZ and the entire society is determined, above all, by the significance of the resolutions it adopted. On the basis of a critical analysis, the congress assessed accomplishments and summed up the experience acquired not only since the previous communist forum but also for the entire 15 years of building a developed socialist society. This substantially enriched the party's conclusions. On this basis, relying on the knowledge of the laws of social progress, and making use of the theoretical works of Czechoslovak and foreign Marxists and the works of Soviet researchers, a long-term plan was formulated for the country's progress not only for the next 5 years but also for the period until the year 2,000. The main content of the congress' documents, the CPCZ Central Committee political report above all, which was presented by Comrade G. Husak, CPCZ Central Committee general secretary, and the basic directions in the economic and social development of the Czechoslovak socialist republic in 1986-1990 and the period until the year 2000, includes the important resolution of accelerating the republic's economic and social development through national economic intensification.

The Czechoslovak communists responsibly discussed the tasks facing society and drafted a realistic and comprehensively considered program. With full justification, Comrade G. Husak noted that the adopted strategy for economic, social and public progress is considered by us the main result of the 17th CPCZ Congress. This course ensures new possibilities of successful development of our society, contributes to promoting activities in all sectors and encourages the use of new approaches and methods.

Exceptionally important to us in the formulation of this program were the April 1985 CPSU Central Committee Plenum and the 27th CPSU Congress, the decisions of which were noteworthy events not only in the life of the Soviet people but the entire communist movement and all progressive mankind. The Czechoslovak communists were given a particularly powerful impetus and an example by the Leninist approach of the CPSU leadership to unsolved problems

and the materials of the 27th CPSU Congress. This pertains to the concept of socioeconomic acceleration, the ability of identifying more fully and utilizing more daringly the tremendous possibilities and advantages of socialism and attaining the highest possible levels in economics, science, technology and culture. The problems were also raised of how to improve socialist democracy through people's self-management, how to reach a high level of party activity and to mobilize the masses for the implementation of the plans. We are solving the same problems facing the Soviet communists and set identical objectives. We proceed from the same revolutionary Marxist-Leninist theory. In this respect, the possibility of the study and creative application of the experience and practical approaches of the Soviet communists are of great help to the CPCZ.

Unquestionably, the 17th congress of our party is of great international importance as well. Like the other fraternal parties, the CPCZ considers its prime duty to do everything it can to prevent a nuclear catastrophe. The real path to securing peace was proposed by the Soviet Union in the program for the total elimination of nuclear, chemical and other types of mass destruction weapons by the year 2000. The suggestion on ending nuclear tests and the subsequent initiative formulated by M.S. Gorbachev in Berlin of substantially reducing conventional armaments and armed forces throughout Europe were also welcomed with exceptional interest.

As was particularly emphasized at the congress, the people of Czechoslovakia comprehensively support the Soviet program aimed at establishing durable peaceful cooperation among peoples and states. Its contribution to the struggle for disarmament is the suggestion of creating a zone free from chemical armaments in Central Europe, recently discussed in Prague by a group which included representatives of the CPCZ, the SED (GDR) and the SDPG (FRG). In the struggle for peace we are encountering the increasing opposition of militaristic and reactionary circles who are aspiring to global domination. This turn of events in the international arena calls for the search of new and more efficient forms of cooperation among fraternal socialist countries in all areas--politics, economics, science, technology and ideology. It presumes perfecting the mechanism and methods of the Warsaw Pact and CEMA in the interest of strengthening defense, coordinating foreign policy and ensuring the all-round intensification of socialist economic integration.

We ascribe great importance to the cohesion and interaction among all communist and revolutionary parties in defending peace and progress and developing equal relations with countries freed from colonial dependence. We see in them friends and fellow workers in the struggle for freedom and deem exceptionally important the unification of all political trends and social movements which are fully resolved to oppose war and who favor the salvation of mankind. The CPCZ is ready to cooperate with anyone aspiring to such objectives. This is consistent with the interest of our peoples who are unsparingly working to attain them.

In summing up the results of the labor efforts of the people, the 17th CPCZ Congress noted that over the past 15 years we have made significant progress in building a developed socialist society. The country's economic potential has increased substantially: compared with 1970 the GNP has increased by 81

percent; industrial output has increased by 97 percent and agricultural production by 33 percent. This enabled us to implement the main objective of the party's economic policy, that of upgrading and qualitatively improving living standards. Individual consumption increased 44.1 percent and social consumption by 108.6 percent. In the past 15 years nearly 1.8 million apartment units have been built in which one-third of the population now lives. We rate these results particularly highly, for we were able to achieve them under worsened domestic and difficult foreign circumstances. These successes convincingly confirm the accuracy of CPCZ policy. Nevertheless, while noting positive results, we should not ignore the shortcomings which hindered the economic and, therefore, social development and which were subjected to sharp and frank criticism at the 15th and 16th CPCZ Congresses. One of the criticized shortcomings was the fact that our party, state and economic bodies have been too slow in solving our problems.

In general, the CPCZ Central Committee appealed at the proper time to the communists--workers in the state apparatus and the economic and scientific areas--to make the economy consistent with the new economic situation which developed in Czechoslovakia, a country with scant reserves of raw materials, as the result of the increased cost of extraction of minerals, the procurement of energy and materials, the discriminatory measures taken by the capitalist states and the aggravation of competition on foreign markets. The CPCZ Central Committee passed numerous resolutions. However, the answer to the new situation was not suitable, as was indicated by the results obtained at the end of the 6th and the first 2 years of the 7th 5-year periods, at which point the growth of the national income experienced a stagnation.

The mobilization of creative forces in 1983 upgraded the activeness of the party members, the personnel of state and economic bodies and the public organizations. It triggered an upsurge in the initiative of the working people, which was crowned by regaining the level of economic growth. On the basis of the gradual implementation of structural changes, improved economic activities and thrifty handling of raw materials, fuel and energy, inner reserves were brought into action. Compared with 1980, the 1985 gross national income increased by 11.5 percent and an income of 28.5 billion korunas was earned over and above the planned figure. Industrial production increased by 14.8 percent and agricultural production by 9.7 percent, including 13.3 percent in crop growing and 7.1 percent in animal husbandry.

Although during the 7th 5-Year Plan the country met its planned volume of output and showed some progress in attaining quality indicators, major problems remained unsolved, such as upgrading production quality, lowering industrial consumption and increasing labor productivity and foreign trade efficiency. Taking this into consideration, along with the increased and newly appeared needs of society, based on the new realities, the 17th CPCZ Congress called most strictly for a faster comprehensive intensification of the national economy.

A revolutionary approach to the actions of today and tomorrow is manifested in the fact that in the forthcoming 15 years we are planning to increase the national income by two-thirds while significantly lowering material and energy-intensiveness of output. Social labor productivity will be increased

by nearly two-thirds. A major step forward in the implementation of the strategic line must be taken as early as the 8th 5-year period, by the end of which the national income must increase by 18-19 percent, and even by 23-25 percent in the Slovak Socialist Republic. The national income will be increased by 92-95 percent as the result of higher social labor productivity.

We are setting intensive assignments, for we are trying to enhance the living standard of the working people, improve the quality of medical services, solve important problems of environmental protection, etc. Compared with the 7th, during the 8th 5-year period the growth rates of individual consumption will double; as a whole, individual consumption will increase by 22 percent. We must also further modernize and retool the production-technical base, for which reason capital investments will be increased by 10-12 percent. Last but not least, we must steadily strengthen the defense capability of the republic and the entire socialist community.

The concept of the economic policy for the 8th 5-year period is a daring and mobilizing one. Practical experience proves that high efficiency cannot be achieved through the extensive method. If we intend to pursue a policy consistent with the interests of the working class and expressing the interest of all working people, a patriotic and internationalist policy, the party has no alternative or choice other than intensification. The era of extensive growth is in the past.

Impressive results have been achieved wherever the intensive type of economic development and its further intensification have been adopted as a guideline. Let us cite as an example enterprises such as Technometr (Prague), the Bearings Plant Production-Economic Association (Povazska Bystrica), Skoda (Plzen), CKD-Praga, Tesla-Golesovice, the nuclear power plant in Jaslovske-Bogunice, Slovnaft (Bratislava), the Czechoslovak-Soviet Friendship Chemical Works (Litvinov) and others. Here raw material and energy are conserved, labor productivity is increasing, quality is improving and competitiveness on foreign markets is growing.

Thanks to intensification, the power-intensiveness needed for creating national income, from the viewpoint of the consumption of primary fuel and energy resources, dropped by approximately 1.7 percent annually during the 7th 5-year period, although the plan called for a reduction of no more than 0.9 percent. Compared with the 1980 level, there was an absolute reduction in the consumption of petroleum and petroleum products, coal, iron ore, zinc, cement and many other types of raw materials.

The 17th CPCZ Congress stipulated that we must above all ensure the growth of the national income with the same power, raw material and material outlays; secondly, we must achieve a faster growth rate of the national income compared with the increased volume of industrial output; third, we must end the trend of declining efficiency of capital assets and gradually increase returns. Consequently, the new quality of economic growth means the more efficient utilization of all production resources, substantially upgrading technical and economic parameters and technical standards, and improving the quality and consumer characteristics of output. The CPCZ is convinced that all the necessary prerequisites for the implementation of such plans exist.

In order to accelerate the growth of the national income we must, above all, make use of the substantial possibilities and reserves created as a result of better quality of labor, commodities and services. We quite frequently simply forget this. Yet better quality goods will enable us to increase consumer value while reducing outlays per unit of national income from a given quantity of raw materials, energy, materials and available assets. This also means more efficient use of labor and materials per unit of consumer value.

Furthermore, processes related to the scientific and technical revolution--electronics and automation--presume a particularly precise, skilled and reliable or, briefly, qualitative labor. This is also needed in order fully to meet growing demand for high-quality goods with new consumer features. The same trend prevails on foreign markets as well. The problems of quality effect all of us together and separately, from student in a vocational technical school, worker, foreman and designer, to minister. This is a broad platform for a dialogue. It is an area for the specific application of forces, so that everyone may contribute to social progress and to the better satisfaction of social requirements through higher quality work.

On the basis of this principled guideline, the latest congress of the Communist Party of Slovakia, which is a territorial organization of the CPCZ, expressed dissatisfaction with the slow increase in high-quality goods. The congress instructed the party members and the government of the Slovak Socialist Republic and its departments, production-economic associations, enterprises, scientific research institutes and all sectors to manage, plan, organize and urge output so that during this 5-year period the share of goods with high technical standards produced in Slovakia reach at least 25 percent.

An increasing number of Czech and Slovak party organizations are gaining an understanding of the scale of the tasks facing the country and are in the leading ranks in the struggle for high quality and efficiency. For example, items with high technical standards account for 55 percent of the total output at the G. Dimitrov joint chemical works in Bratislava. The share of such goods amounts to 43.1 percent at the metallurgical combine in Vitkovic, particularly its shop which supplies goods for the nuclear power plant. Tatra trucks enjoy a good reputation throughout the world. Their technical standards match those of the best European companies. The same applies to some types of textile looms, shuttleless and knitting in particular.

Greater efficiency and accelerated development of resources are closely related to structural changes in the economy. For example, machine building output will increase during this 5-year period by approximately 25 percent and the production of electronic goods by more than two-thirds.

The conversion of the national economy to intensive development depends to a decisive extent on the substantial acceleration in the utilization of the achievements of scientific and technical progress. The CPCZ Central Committee pays constant attention to such problems. The resolutions of the June 1983 CPCZ Central Committee Plenum formulated the programmatic orientation of scientific and technical progress, which includes 31 scientific and technical programs and a governmental target program. They are closely related to the international obligations assumed by Czechoslovakia within the framework of

the Comprehensive Program for Scientific and Technical Progress of CEMA Members for the Period Until the Year 2000. The program calls for our intensive participation in solving specific problems of use of electronics and comprehensive automation, accelerated development of the nuclear power industry, use of new types of materials and the development and utilization of biotechnology. Its implementation will give us guarantees and open great opportunities for building developed socialist society and enable us to formulate a scientific range of research programs and programs for technical reconstruction and modernization of the most important sectors. Comrade G. Husak has pointed out that we consider the implementation of the program a key task of economic and scientific and technical policy and will be constantly directing the efforts of all sectors, associations and enterprises and the entire scientific research base toward its implementation.

Taking into consideration the decisive role which scientific and technical development plays in economic intensification, the 17th CPCZ Congress emphasized the responsibility of the leading personnel of the central agencies in creating conditions for the development of innovation processes and formulating the key measures of technical development and their technical and economic parameters. In this area the general directors of production and economic associations and enterprise managers bear direct responsibility for the accelerated practical utilization of the achievements of science and technology. They must make decisions related to the innovation process and its end results. Actually, they frequently shift this to special departments and institutes, a practice which must be stopped.

In addition to other measures, in order to ensure the skilled training of leading cadres, the CP of Slovakia Central Committee organized theoretical and practical seminars for party and economic personnel and consultations given by leading domestic and Soviet scientists. Such meetings dealt, in particular, with problems of the socialist way of life, topical problems of low-tonnage chemical output, the use of magnesite, the development of powder metallurgy, the manufacturing of instruments and equipment, use of forecasting, development of biotechnology, use of computers, automation of design and engineering work and other problems. The joint discussion of vital problems enhances the level of decisions making and the implementation of party policy. It has a positive impact on the thinking of the leading personnel and enables us to concentrate on the main problems promptly and accurately.

One of the key areas in ensuring the utilization of the achievements of scientific and technical progress is capital construction. The congress emphasized that it is on this basis that we must more firmly engage in the intensification of the reproduction process and channel capital investments where they will be most effective. Capital construction must be redirected from building primarily new projects to updating and rebuilding existing ones and substantially upgrading the efficiency of the investment process.

The possibility of economic integration with the fraternal countries is one of the greatest advantages of socialism. It is predetermined by the political, economic and social unity among socialist states, the similarity of their economic mechanisms and their common interests and objectives.

Although major and impressive successes have been achieved in the economic cooperation among socialist countries, their level is still below the needs and possibilities of the contemporary stage. Today we face in its entire magnitude the common task of implementing the resolutions of the summit economic conference of CEMA members and the directives of party congresses with much greater initiative and the rejection of stereotypes. We in Czechoslovakia, which is a relatively small country, are particularly interested in intensifying cooperation, above all with the USSR, considering this the only possible and realistic way of accelerating intensive economic development. I am confident that, as always, we shall have the full understanding of our Soviet comrades in this matter.

Our belief is based on a number of positive results from mutually profitable cooperation, which is developing within the framework of intergovernmental agreements. Czechoslovakia is participating in the laying of the Progress Gas Pipeline from Jamburga to the western borders of the USSR, the construction of the Krivoy Rog Ore Mining-Concentration Combine and other projects. The USSR is continuing to assist us in the construction of the Prague subway and the building of nuclear power plants. Cooperation is increasing in the electrical engineering and machine building industry, particularly in the computer area.

Direct friendly contacts among districts, cities and organizations play an important role in the intensification of our relations. They provide the possibility of fruitful exchange of experience in party and economic work, encourage competition in upgrading quality and efficiency and the development of friendship among enterprises and scientific research institutes.

We fully agree with the view expressed by M.S. Gorbachev to the effect that the main thing now is the extensive development of direct relations and the creation of joint firms and associations. This is confirmed by the positive results obtained thanks to the new form of cooperation. A joint Czechoslovak-Soviet basic laboratory on problems of artificial intelligence is doing successful work in Bratislava. This enabled Czechoslovakia to participate in the program for the creation of a new generation of computers by CEMA members. The international scientific collectives at the scientific research institute for animal husbandry in Nitra are making a substantial contribution to the common efforts. Thanks to this, within a short time we were able to eliminate a significant lagging behind capitalist countries in embryo transplants and developing highly productive dairy cattle breeds. We believe that the concept of establishing direct relations between Czechoslovak enterprises and enterprises in the other socialist countries, which was recently adopted by our government, will create favorable conditions for the full application of this new progressive method.

Economic progress calls for increased participation of the working people in management and use of brigade forms of labor organization and wages. It is an efficient means of implementing the principle of wages based on the real contribution of the working person and the elimination of equalization. We must also wage a decisive struggle against unearned income and violations of socialist principles of payment according to labor. The comprehensive development of the members of the socialist society presumes the systematic implementation of the principle "From each according to his capability and to

each according to his work," which is a manifestation of social justice and a contribution to the further development of democracy.

Increasing the role of the human factor is being ascribed ever greater importance in the strategy of accelerating economic and social development. The objectives set at the 17th Party Congress can be implemented only by people who realize that the successful implementation of plans depends on changing the quality of economic development and intensification based on scientific and technical progress, people who can make extensive and energetic use of the benefits of the scientific and technical revolution and who, as they change the world, change themselves as well.

In itself, such an understanding of development indicates the significance which Marxism-Leninism ascribes to the individual in the system of economic and overall social relations under socialism. This also refutes the false claims of bourgeois and right-wing opportunistic ideologues, who accuse real socialism of being indifferent to the problems of the individual and who pit against it the so-called "socialism with a human face." The development of all human capabilities is in the interest of our society. As was pointed out at the congress, we need people who can solve the new problems. That is why we consider perfecting the professional and spiritual qualities and the moral growth of the people and their collectives both as the target and the means of lifting society to a higher level.

In its search of ways of increasing the participation of the working people in management and the making of governmental decisions, the CPCZ turns to the materials of the 27th CPSU Congress, where it finds a number of important ideas relative to socialist self-government. We are striving toward the growth and increased dissemination of elements of people's self-government through the activities of bodies and organizations united within the National Front, and through the work of legislative bodies and national committees, so that such agencies may act not only in the name of the people but with their direct and extensive participation. It is from this viewpoint that we are assessing the efficiency of the already existing and the new forms of participation of working people in management and administration, such as counterplanning, production conferences, brigade forms of labor organization and wages, and participation of citizens in the work of national committees. Although obvious progress has been made in this area, the party is dissatisfied with the current situation and is promoting the more widespread and more efficient participation of the representatives of the people in management and administration. We consider strengthening discipline, order and legality and organic component of the development of democracy. Socialist society has no right to show a condescending attitude toward lack of discipline, theft of public and private property, crime, fraud and other negative phenomena sharply criticized by the working people. That is why the struggle against such intolerable phenomena, a struggle which has become particularly intensified as the result of the letter issued by the CPCZ Central Committee Presidium to party organs and organizations, is enjoying the full support of the broad public. We proceed from the fact that the protection of public property is not only the concern of internal affairs and justice authorities but also a case of collective self-defense, of live people's self-government.

Within the range of problems of strengthening Czechoslovak statehood, to which the CPCZ ascribes essential significance, the congress discussed problems of national relations. The party will continue to show concern for the further strengthening of the united Czechoslovak state, on the basis of its federal structure and of fraternal relations and cooperation between both nations and all ethnic groups, so that the international unity of Czechoslovak society may become even stronger. In the area of the national economy we shall strengthen the unity of Czechoslovak economy on the basis of the full utilization of the resources and possibilities of both national republics; in the governmental-political area we shall intensify the guiding and coordinating functions of federal authorities.

In the spiritual area, the party is formulating increasingly stricter criteria of ideological activities. "Political-educational and ideological work must be closely related to the problems to be solved during the forthcoming period," the congress noted. It is important to link conceptual, moral and legal upbringing with the struggle for the accelerated conversion of the economy to intensification. Our ideological workers must provide even more convincing explanations of the correlation between domestic policy and the international situation and the struggle between socialism and capitalism. In order to improve further the education of our cadres and ethnic groups and to enhance their culture, the congress formulated responsible assignments to workers in public education and to men of science, culture and the arts.

The party is facing increasingly stricter requirements in connection with the implementation of the program for the acceleration of the socioeconomic development of our society and its comprehensive advancement. That is why the 17th CPCZ Congress paid great attention to upgrading the level of training and combativeness of the party members themselves.

The party members must adopt a critical approach to all areas of social life. They must not limit themselves merely to the identification and noting of problems, unfinished products and shortcomings, but seek and find ways of their elimination, consistent with the spirit of the time. We must also think of how to enhance the combat capability of the party organizations. That is why the congress so strongly emphasized the role and tasks of cadres entrusted by the party with the organization and management of collectives.

In the 1930s the Soviet communists formulated the slogan "Cadres Decide Everything." The same slogan was heard at CPSU congresses and was adopted by our party as well. The 17th CPCZ Congress singled out the qualities of the manager, such as "the ability to march in step with the new tasks, to think independently and creatively, to assume responsibility, to be exigent toward himself and others, and to adopt a principle-minded and responsive attitude toward people." The congress set specific critical requirements concerning the leading personnel of departments, sectors, enterprises and national committees and public organizations. It asked all party organizations and individual party members to become aware of their high responsibility.

The proceedings of the 17th CPCZ Congress indicated that the party is on the level of the requirements of our time. Its political, ideological and moral strength, unity and efficiency, and loyalty to Marxism-Leninism and

proletarian internationalism were demonstrated once again. The congress gave the party members a feeling of confidence and instilled in them resolve and optimism. It inspired them to do further work. Aware of the fact that the program developed at the 17th Congress is consistent with the expectations, needs and vital interest of the entire Czechoslovak people and of all of our national and ethnic groups, the party is working extensively for its dissemination among the masses. This program was adopted as its own by the entire National Front, and the people expressed their approval of it in the course of elections for representative bodies and is supporting it with its tireless daily labor.

We are struggling for the implementation of the new plans in the year marking the 65th anniversary of the founding of the Communist Party of Czechoslovakia. The overthrow of capitalism, the victory over fascism and the successes in building socialism confirm the role played by the revolutionary vanguard of our people. As such, our party has always considered serving the working people, concern for their good and the struggle for peace and progress the meaning of all of its activities. "Along our way," Comrade G. Husak said, "we encountered failures and defeats. However, never, even during the most difficult times, have the party members interrupted their just struggle for the vital interest of the working class and all working people, for a better future for the peoples of Czechoslovakia." The Czechoslovak communists are fully aware of this high responsibility for the cause of the party and the people and that of socialism today as well.

Western ideologues would like to instill to our people the idea that we in Czechoslovakia would be unable to solve the problems of quality and efficiency without the private ownership of means of production. Yet we are confident that this historical problem as well will be solved and high quality and efficiency will be achieved with the same success with which despite the cold war and the embargo our country was able to industrialize, achieve collectivization and enhance the cultural standards of the people. We shall fulfill our plans if we are able to mobilize and inspire the masses and if the masses adopt the party's cause as their own.

We are deeply convinced that our Communist Party, which has been able to surmount many difficulties along its way, which was tempered in fierce battles and strengthened its Leninist character, will lead our peoples and ethnic groups to new objectives and new accomplishments.

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## CONGRESS OF INNOVATIVE QUEST

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[Article by Chudomir Aleksandrov, member of the Politburo and secretary of the Bulgarian CP Central Committee]

[Text] The 13th BCP Congress was a noteworthy event in the life of the party and the people. It was held on a high ideological-theoretical and organizational-political level and became an event of historical significance in the destinies of the country. The congress earmarked the general line of the BCP, concretized and enriched the party program and defined the long-term strategy, ways and tasks in the further advance of the Bulgarian People's Republic. It was a congress of innovative quests, daring assessments and creative approaches in solving the basic problems of the country's socioeconomic progress.

The documents approved at the party forum, the opening words and final speech of Comrade Todor Zhivkov in particular, are of programmatic nature. They reflect the revolutionary and constructive nature of the strategic course charted by the BCP for decisive reorganization and qualitative changes in the economy and spiritual life of our society. They contain a profound Marxist-Leninist analysis of the period since the 12th Congress, indicate unsolved problems, provide a scientific answer to crucial problems and formulate essentially new objectives. The participants in the congress and all Bulgarian communists consider them a significant contribution to the creative enrichment of the theory and practice of socialist building in our country.

Those present at the congress, attended by 2,661 delegates and guests and representatives of 137 foreign delegations, could experience the inordinately bright and optimistic atmosphere of practicality and realism, criticism and self-criticism and concern for the fate of the socialist homeland. The congress merged as one the rich scientific developments and major political events of the precongress period, the inspired labor accomplishments of the 8th 5-year period and the firm resolve of the party and the people to follow the chosen way. Like the entire accountability and election campaign, the congress confirmed the unshakable unity between the party and the people.

Hundreds of thousands of communists, members of the Bulgarian Agrarian National Union and millions of nonparty people took part in the nationwide

discussion of the congress' theses. Nearly 400,000 people spoke out at meetings and more than 75,000 suggestions were submitted. Thousands of others were received by the press, radio and television and expressed in letters.

It was as though an invisible bridge linked the congress hall with all party members and working people. The direct and full relay of all sessions by television and radio, and their comprehensive coverage in the press allowed the people to witness this noteworthy event and enabled millions of people directly to follow the open, honest and responsible discussion of the vital problems of our present and our future; they charged our people with political resolve and the will of the participants in the party forum actively to engage in practical work.

Therefore, the preparations for and holding of the congress and its resolutions on major problems of the country's development during the 9th 5-year period and until the year 2000 were accepted by the entire people as their own. This is the inexhaustible source of our trust that the party's concepts will become the will and destiny of millions of working people.

The 27th CPSU Congress had and will continue to have a unique impact on the proceedings and resolutions of the 13th BCP Congress and the situation in the country. "This event is of crucial importance to the further development of the Soviet Union and a powerful booster in the development of the global socialist system and social progress in the world," the BCP Central Committee report noted.

It is no secret, as we have always emphasized, that the BCP and our entire people have always used and will continue to use the rich experience of Lenin's party, the Soviet state and the heroic Soviet people--the pioneer in building socialism. As Comrade Todor Zhivkov noted, "The practical spirit and captivating ideological and political charge of the proceedings of the congress instill in all of us tremendous optimism." We are pleased that the CPSU is accepting the challenge of the time fully armed, earmarking ways of reaching a qualitatively new status in Soviet society with its inherent daring, scope and knowledge, combining the advantages of socialism with the achievements of the scientific and technical revolution, enhancing the living standard of the Soviet people and safeguarding peace the world over.

Good example is contagious. That is why it was reemphasized at our party forum that the use of the experience of the CPSU and the other fraternal parties engaged in solving similar problems is the international obligation and an essential feature of socialist internationalism and a characteristic aspect of BCP theoretical and practical activities and one of the decisive factors for its successes.

The 13th Party Congress weighed and analyzed what had been achieved in the 30 years since the historical April 1956 BCP Central Committee Plenum. To us, Bulgarian communists, and to our entire people, this plenum is of permanent historical significance, for it formulated the BCP general line, restored the Leninist principles and norms of party life, which had been violated after the death of Georgi Dimitrov with the cult of personality, and gave scope to the strength and energy of the party and the people for creativity and innovation,

making party and state activities consistent with the requirements of the objective laws of social life. The April plenum marked a profound, a comprehensive Marxist-Leninist change in our entire development.

In the past 30 years socialist Bulgaria achieved remarkable successes in all fields of life. Its national income increased by a factor of 8, capital assets by a factor of 10 and social labor productivity by a factor of 8.4. The volume of industrial output increased by a factor of 14, including 61 in machine building and 55 in the chemical industry. Average annual grain production increased from 4.1 million tons in 1953-1957 to 8.4 million in 1981-1985. Real per capita income increased by a factor of 4.4 and the value of social consumption funds, by a factor of 14. Naturally, these figures do not cover our entire gains and give only a very partial idea of the difficulties and complexities of our development, the great dedication of the generations, the accomplishments of individuals at their jobs, the heroism of a small previously backward country, the blossoming of its science, culture and education, the spiritual enhancement of the people and the friendly aid of class and blood brothers.

As a manifestation of creative Marxism-Leninism, the April line was embodied in the BCP program which was drafted and adopted at the 10th Congress. It was further concretized in the broad theoretical activities conducted by the party subsequently, particularly after the 12th Congress. The party proved to be on the level of its historical mission. It proved its ability profoundly to identify the essence of processes and phenomena, promptly to detect crucial social needs and properly to define its immediate and more distant projects.

Consequently, the 13th Congress was the link in the chain of historical events, which tied the party's entire theoretical and practical activities to the new tasks, as the result of which, in the course of the further building and advancement of socialist society and the substantial changes made in the base and the superstructure and in close unity with the other socialist countries, to contribute to the strengthening and blossoming of socialist civilization and to accept adequately the challenge of the 21st century as a highly developed socialist state.

The 13th Party Congress set as its strategic course the extensive development of the scientific and technical revolution in our country. This is a radical problem and the key or, more accurately, as Comrade Todor Zhivkov said, the superkey to our progress. It is a question of requirements for the country's development in an essentially new situation, a qualitatively new approach to this development and a broad, complex and difficult reorganization.

This reorganization was not undertaken by us only yesterday. The party armed the people with important theoretical concepts on the implementation of the scientific and technical revolution and formulated the necessary approaches and means to this effect. This process entered its active phase at the February 1985 BCP Central Committee Plenum, the resolutions of which were concretized and practically implemented at the January 1986 Plenum. That is why it was precisely this problem that became the focal point of a deep discussion at the congress. All aspects of the extensive and comprehensive application of the highest achievements of scientific and technical progress

and the ways, means and economic levers which would be used to this effect were discussed. Unsolved problems and work shortcomings which hindered our progress were considered in a critical and constructive spirit. Significant reserves were identified and the role and place of the human factor were defined. This vivifying process is continuing. It was most clearly manifested in the document which was adopted immediately after the congress, entitled "On a Qualitatively New Economic Growth."

The main feature in the new scientific strategy of the 9th 5-year period and until the end of the century is the drastic acceleration of the pace of our socioeconomic progress and the maximal use of all intensive factors. It is a course of radical reequipping of material and technical facilities and a sharp turn to qualitatively new technologies and technical means, which are the result of the contemporary scientific and technical revolution and profound essential changes in the entire socioeconomic structure and social management and qualitative changes in science, education and culture. A turn is taking place in the material and spiritual areas of the life of our society.

Above all, we must ensure the type of economic growth which would enable us to increase the national income and social labor productivity by a factor of 3-3.5 by the end of the century, or by a factor of approximately 2-2.5 over the next 10 years, through 1995, and come close to the economically most developed CEMA countries and other advanced European states. All of this must be achieved on the basis of the highest accomplishments of the scientific and technical revolution, making use of essentially new technologies and extensively applying microelectronics, robotics and automation, biotechnologies and new materials. It is a question of resource-conserving economic upsurge, of a progressive technological renovation and changes in the structure of the entire economy and an essentially new strategy used in the renovation itself of industrial and agricultural capacities and output. It is a question of changing the quality of output and its criteria, of use of new technologies consistent with world standards and ensuring the competitiveness of our goods on foreign markets. Furthermore, the qualitatively new growth of the economy will be accomplished on the basis of the full utilization of the production apparatus, which is tremendous on the scale of Bulgaria, making greater use of available labor resources. This will be achieved also by taking decisive steps to surmount cadre turnover in labor collectives, to perfect the economic mechanism and to set efficient forms of labor and production organization in primary collectives and brigades, under the conditions of self-managing economic organizations.

The new acceleration is required by the time in which we live, the potential we have acquired and the quality of our resources in the light of scientific and technical discoveries. All of these prerequisites, which were identified and given priority by the congress, must be used in a qualitatively new way. Profound changes must be made not only in material production but also in science and its structure, organization, incentives and management, so that it may become a powerful universal production force and a revolutionizing factor in the further rapid comprehensive upsurge of the country.

These plans indicate most clearly that change is needed *urbi et orbi*, in social structures, the social management system, the spiritual area, social

services and, not least, party activities. The new content also requires new forms, solutions, criteria and approaches. It requires a new attitude toward reality: practicality, discipline, new type of organization and painstaking daily efforts on all levels--from top to bottom. These basic postulates also contain the ways and criteria of our further social progress. In addition to the closer linking of social gains by the collectives and individual working people to end results and the effect of their labor, we are planning the broader and more comprehensive social development of society as a whole.

The stipulations of the congress broaden the boundaries of social policy. It will include more completely and on a higher quality level all aspects of human development, inseparably related to the needs for a more harmonious and comprehensively rich life of the individual, the final objective and main criterion of which will be the overall realization of such life in society. Such a comprehensive interpretation of party social policy is consistent with the planned economic objectives and the higher efficiency of socially useful labor and the social requirements of the man building a developed socialist society, "the working man, the man-creator and the man-consumer." However, a qualitatively new approach to social policy cannot be attained if reduced merely to ensuring the necessary income and limiting the solution of manpower problems merely to that of being an appendix to the production process, without creating conditions for the social activeness of the people and for progress, without providing scope for the creative possibilities of the individual and without increasing his spiritual values.

The 13th Congress clearly defined the ways of further democratization of social relations and social life as a whole, making them more realistic and practically substantiated. It provided a new impetus to the development of socialist democracy as an organic aspect of the integral reorganization, accomplished with a revolutionary scope, and a prerequisite for the broadest possible development and utilization of the achievements of the scientific and technical revolution. The new processes formulate new requirements toward cadres: the development of loftier ideological-political and moral qualities, comprehensive technological thinking, a feeling for the new, and a persistent struggle against the vestiges of the past, negative phenomena and a variety of deformations. This is a path free from the old limitations, a path leading to a new understanding of responsibility by everyone concerning his duty and a criterion of the duty of all to all.

It is a question of social conditions and premises with which man will realize himself through his toil more fully and energetically. Public production automation and cybernetization and the contemporary scale of data processing substantially change the nature of labor, creating new endless opportunities for its intellectualization under socialism. In turn, the further upsurge of the scientific and technical revolution is inconceivable without perfecting the political system, which is democratic in its essence and form.

The congress opened the way to efficient practical ways and means of intensification of labor democracy as a major essential component of the structure of production relations. A high assessment was given to the possibility of the working people to discuss, adopt and implement the principles of the new labor code.

Steps related to the practical reorganization of the superstructure, strictly consistent with the principles of democratic centralism, were welcomed with approval and support. The higher level of management is faced with substantiated demand of eliminating departmental exclusivity and limitation, providing scope for scientific and technical progress and intensifying its national economic results. That is why today we are persistently eliminating the barriers of parochialism so that everything can be subordinated to national objectives and interests. The congress called for perfecting centralism as a condition for upgrading the work quality of management bodies and for pursuing a unified policy.

Guided by the criteria of our time, the congress enriched the content of socialist democracy, emphasizing that at the present stage a qualitatively new political objective is formulated, for it is no longer merely a question of participating in management but of self-management, of a new historical step in the transformation of the working person and the labor collective from the object to the subject of social management. It is thus that gradually power will shift from being exercised for the people to being exercised by the people themselves.

Our congress became a proof of the systematically peaceful and profoundly international foreign policy of the Bulgarian People's Republic. It reasserted that the party and state basic foreign policy line is the all-round cooperation between Bulgaria and the other members of the socialist community. Strengthening their unity and cohesion is the supreme imperative of the time and the main prerequisite for the program of joint action in the defense of peace and security in Europe and throughout the world, adopted by the Warsaw Pact members. Bulgaria's participation in CEMA and in socialist economic integration is a vitally important prerequisite for its successful progress. The theses adopted at the congress define such participation as one of the decisive factors in the implementation of the main socioeconomic task of the 9th 5-year period (1986-1990), which means achieving a further growth in the well-being of the people and the comprehensive satisfaction of the material, spiritual and social needs of the individual. In this connection, particular importance is ascribed to the resolutions of the Moscow summit economic conference (1984) and the Comprehensive Program for Scientific and Technical Progress of CEMA Members Until the Year 2000.

Cooperation with CEMA members, the USSR above all, is an irreplaceable factor in laying the material and technical foundations for mature socialism and for following the innovative course of comprehensive intensification, upgrading social production efficiency, accelerating scientific and technical progress and successfully solving socioeconomic problems. The congress assessed in a new light and more fully the contribution made by the USSR to perfecting the structure of our national economic complex and its increasingly close ties and complementary nature with the national economic complexes of the other fraternal countries and the enhancement of the technical and industrial standards of output and production quality.

The 13th Congress asserted the accuracy of the BCP line of intensification and enrichment of cooperation with the Soviet Union under contemporary conditions, when a technological updating of the production process and comprehensive

economic intensification are required. We shall achieve a qualitatively new stage of comprehensive rapprochement with the Soviet Union thanks to the unified implementation of the resolutions of the 27th CPSU Congress and the 13th BCP Congress, the creative implementation of the long-term program for the development of economic and scientific and technical cooperation between our countries for the period until the year 2000, and our country's participation in progressive forms of bilateral and multilateral cooperation, such as direct relations between enterprises and scientific institutes and the creation of joint scientific-production and other types of economic organizations. A daring approach to intensified production cooperation and socialist enterprise open great opportunities for shortening the time for development and mastery of new types of equipment. "It is precisely this," Comrade N.I. Ryzhkov said at our congress, "that will enable us to shift our cooperation to intensive development, lift it to a new qualitative standard and provide a powerful impetus for the further expansion of our trade-economic, scientific and technical and other relations."

The new forms of integration face us with new tasks and encourage us to seek new solutions. This 5-year period the amount of reciprocal procurements will exceed the impressive figure of 70 billion rubles, which is approximately 40 percent higher than what was achieved in the 1981-1985 period. The most considerable increase will be in the area of goods promoting technical progress. The share of the Soviet Union in our country's overall trade will increase from 57 to 63.2 percent.

The 13th BCP Congress paid great attention to international relations. The congress and the Bulgarian communists and entire people viewed the new concept of a comprehensive system of international security, as presented in the 15 January declaration by M.S. Gorbachev, CPSU Central Committee general secretary, as a powerful impetus in the struggle for peace and disarmament. The gradual elimination of nuclear and other types of mass destruction weapons until the year 2000 is a program of action which the Bulgarian communists and the entire people warmly welcome and unconditionally support. Each new essentially important initiative of the Soviet Union triggers true happiness in our people, such as its call for trust, display of goodwill and setting the example of taking practical steps, such as the unilateral moratorium on nuclear explosions. They make us spiritually stronger, firmer and more farsighted. However, they also mobilize us, asking us to link more consistently this active political offensive with the results of our socioeconomic and ideological competition with the West.

The congress approved the efforts of the Bulgarian People's Republic to continue, together with the USSR and the other fraternal socialist countries, to defend the interest of peace and socialism in all meetings on disarmament and strengthening international security--in Stockholm, Vienna and Geneva--and to apply tireless efforts to attain practical results at such talks. Loyal to its international duty, the Bulgarian People's Republic will, as it has in the past, support the peoples of Asia, Africa and Latin America in their struggle against neocolonialist policy and aggressive imperialist and reactionary actions and for true national independence and the right to choose their own path and have equal participation in international economic cooperation, and peace and social progress.

Once again we expressed our conviction that the establishment of a climate of peace, security and cooperation in the Balkans, this important European area, is consistent with the vital interests of all Balkan nations and fully consistent with the principles of the Helsinki Final Act. The Bulgarian People's Republic has repeatedly displayed goodwill and a responsible approach to such problems. The suggestion formulated at the congress for the Balkan states to conclude a treaty, which would not only ban nuclear and chemical weapons in the Balkans but would ensure the ecological protection of the peninsula, is a confirmation of the principle-minded, constructive and realistic nature of our policy. An appeal to this effect was addressed to all European countries.

Representatives of communist, worker and other parties and movements from 107 countries participated in the proceedings of the BCP forum. Their presence made the congress a vivid demonstration of solidarity among revolutionary and progressive forces in the world in the struggle against imperialism and for peace and safeguarding human civilization from nuclear catastrophe.

The implementation of the resolutions of the 13th BCP Congress in the foreign policy area is a reliable guarantee that Bulgaria will remain a positive factor in international relations and, as in the past, will continue to make an active contribution to the implementation of the coordinated line of the members of the socialist community in the international arena in the struggle for removing the threat of nuclear war and for a durable peace, safety and cooperation and the solution of the other global problems of mankind.

The warm support of the party's Central Committee and the enthusiasm generated among the Bulgarian people in connection with the practical steps earmarked at the conference of the Political Consultative Committee of Warsaw Pact Members, in Budapest, aimed at the further strengthening of the political and defense alliance among the fraternal socialist countries in the interest of peace and security on earth and the even firmer opposition to the aggressive imperialist forces, U.S. imperialist circles above all, was an expression of this practical readiness displayed by the Bulgarian communists.

The fulfillment of the tasks set at the 13th Congress--ensuring a qualitatively new economic growth, reaching a new pace of development, and a turn in the political superstructure and in the economic and social areas, ideology and foreign relations--depends to a determining extent on the unity and combat capability of party ranks and on the level of its leading and guiding efforts.

The congress indicated the innovative path of BCP development, which has enriched the post-April period in its history. It was noted by the forward and legitimate growth of the party's leading role. As was emphasized at the congress, the party became stronger ideologically and organizationally; it formulated and asserted the qualities which enable it always to march in the vanguard of the working people. Its ability to identify and study new phenomena and processes, to earmark specific solutions to arising problems and to inspire and mobilize the people's masses for the implementation of party policy increased significantly.

In the course of its advance, the party, which numbers more than 900,000 members, qualitatively changed its own sociohistorical role. From a superior form of political organization of the working class it is becoming the political organization of the entire society. Today, in terms of the objectives, policies, function, structure and work style and composition, the BCP is profoundly national. As the BCP program indicates, a number of new areas appeared in the course of its becoming a party of the whole people, making possible the manifestation of the party's more comprehensive and decisive function. The 13th Congress codified and enriched the content of areas such as the scientific and technical revolution, the extensive technological updating of the material and technical base, comprehensive intensification and dynamic growth of output, advancement of social relations, socialist ownership, the political system, the development of socialist democracy and the creative forces of the nation, and the increased participation of the country in socialist economic integration.

Today even more than yesterday the role of the BCP depends on its systematic and persistent efforts to strengthen its ranks, develop intraparty relations on the basis of democratic centralism and upgrade the combat capability of all party bodies and organizations and the consciousness, activeness, organization and discipline of the party members.

The 13th Congress formulated new stricter criteria for the activities of primary party organizations. The basic stipulation on the primary party organization as the leading political nucleus of the labor collective became even broader and more meaningful. The main thing now is for the primary party organizations to participate more energetically in the struggle for the application and utilization of the highest achievements of scientific and technical progress and for converting primary units into self-managing organizations, and intensifying the activeness and initiative of party members. This will be helped by the enrichment of their internal life in accordance with the Leninist principles and standards, the observance and development of their autonomy and increased responsibility for assignments.

The congress substantiated the need to enrich intraparty relations on the basis of the creative application of the principle of democratic centralism. In accordance with the main laws of social advance, the high level of unity and combat capability of the party and the increased political maturity and standards of the party members, the party forum charted a course of intensified intraparty democracy, democratization of the mechanisms for discussion and solution of problems, increased openness in party life, development of criticism and self-criticism as a tried method for the identification and elimination of contradictions, and perfecting of the management of intraparty and social processes. At the same time, the main ways of strengthening the party's centralized leadership were defined: strengthening its democratic, scientific and strategic nature, discarding secondary and insignificant functions and tasks and rejecting methods based on directives. The main thing now is really to enhance the role of the human factor in our development, conduct an open and honest dialogue on all problems and increase the social activeness of the working people.

The lines of a bold enhancement of the activities of party bodies and organizations to a higher level have been earmarked, in order to increase the leading role of the party in the life of society and in the struggle for the implementation of the scientific and technical revolution.

In order for the accomplishment of the 13th Party Congress to become truly historical, its ideas, concepts and resolutions must be implemented. "More than ever before, today we need high-level organization, order and discipline," the congress stressed. "Tremendous work must be done in terms of scope and quality." Under the leadership of party committees and organizations, throughout the country, among party members and all working people, extensive political, ideological and organizational activities are being promoted to explain and implement the congress' stipulations and requirements. The party organizations are concentrating their daily efforts in the labor collectives, where the new problems and tasks formulated by the congress will be solved most efficiently.

The frank discussion between the party and the people is continuing at okrug conferences, open party meetings and sessions of leading party, state, social and economic bodies. Its purpose is to direct the thoughts and actions of all people to the daring, comprehensive and efficient solution of problems. It is entirely natural to consider that the first to set an example of new understanding and a highly conscious social behavior will be the communists, all active builders of socialism, the members of the Bulgarian Agrarian National Union, the trade unions, the Fatherland Front, the Komsomol and the other organizations and creative associations.

The pace and quality of our development are now becoming the foundation of everything. Party committees and organizations, leading state, economic and public bodies, party members and all leading cadres are analyzing the condition and concretizing the assignments of their labor collectives in the spirit of the concepts and conclusions of the BCP Central Committee Politburo document on the qualitatively new growth of the economy. Without concealing errors and difficulties, they are taking efficient steps to strengthen the party's influence at decisive sectors and units in the mastery and utilization of new approaches and the new style of thinking and acting; they are persistently seeing to it that in each party organization and labor collective an atmosphere of intolerance of weaknesses and shortcomings and of holding anyone who has failed in his assignment responsible is developed.

We realize that we shall be unable to advance even a single step unless we learn to work in a new style, unless we are able to put an end to the still existing sluggishness, conservatism and bureaucratism. It is clear that some cadres are simply unprepared for the new style. This is understandable and surmountable. Today our efforts are aimed at making the fresh wind of the ideas of the 13th Congress be felt in everything, in the work style, and in the specific qualitative changes in the production, social and spiritual areas. We are formulating stricter requirements toward the party members and their qualities and life stance. A decisive struggle is being waged against a passive attitude and satisfaction with mediocre results, a struggle against those who do not favor the new, are not opposing the old approaches or obsolete and unnecessary forms and methods of acting. We are trying to make

the party instructions stimulate the solution of important problems, be specific and realistic and be subject to systematic and strict supervision. It is the duty of the party bodies and organizations, the cadres and all party members to do everything necessary to strengthen this work style at each work place. The confidence that we shall be able to deal with the major initiatives which we are undertaking is given to us by the warm support with which the people welcomed the congress' resolutions, accepted them as its own and approved them fully. The same type of confidence is given to us also by the manifestations of nationwide love for and trust in the BCP.

Relying on its rich, practically tried experience in solving major political, economic and social problems, our party is rallying its ranks even more closely and mobilizing the energy and creativity of the people. We can say with the greatest assurance that the postcongress period was a concentration of social thought, experience and action. Under the leadership of the BCP, qualitative changes are being initiated in socialist Bulgaria throughout its society, changes which will lead us to the peaks of world science and technology and help us to solve the radical problems which arise in the course of the country's socialist development and the historical progress of mankind.

The innovative congress opened even wider the gates which will enable small Bulgaria to move along the path of building developed socialism with substantiated optimism and the hope that the future will belong to communism--to the happy day awaited by all who are marching in the ranks of human progress, fraternity, equality and peace and are struggling for the communist ideal.

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## CONTEMPORARY WORLD: TRENDS AND CONTRADICTIONS

### CAMBODIAN REVOLUTION: DEVELOPMENT STAGES

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[Article by Heng Samrin, general secretary of the Cambodian National Revolutionary Party Central Committee and chairman of the State Council of the People's Republic of Cambodia]

[Text] French imperialism began its penetration of Indochina by the middle of the 19th century. After capturing a number of provinces in South Vietnam and using pressure in Phnom Penh, France forced King Norodom to sign a protectorate treaty on 11 August 1863. On 17 June 1884 the French government forced Norodom to sign a new agreement making Cambodia an appendix of France, its colony. In 1887 France merged Cambodia with its possessions in Vietnam and established the Indochinese Union. Until 1899 the Indochinese Union, which include Laos, was ruled as a single system headed by a French governor.

Under the protectorate, the Cambodian people, like the peoples of Vietnam and Laos, rose repeatedly against the colonizers and the traitors to the homeland. However, these actions failed for lack of a clear political course. This was consistent with the then existing stage of development, and the fact that there was no political organization to head the struggle for national liberation to its victorious end.

The victory of the Great October Socialist Revolution in Russia and the creation of the first socialist state in the world instilled hope in the minds and hearts of all oppressed nations. Thanks to Comrade Ho Chi Minh, who was then known as Nguyen Ay Quoc, the working people of Indochina became acquainted with Marxist-Leninist doctrine. Rallying all communist movements in Vietnam, on 3 February 1930 Nguyen Ay Quoc founded the Communist Party of Vietnam, subsequently reorganized into the Communist Party of Indochina (CPIC), which was called upon to head the struggle of the peoples of Vietnam, Cambodia and Laos against the common enemy--French imperialism.

This event entailed the appearance of political organizations in Cambodia, which assumed the leadership in the struggle waged by the people's masses against the fierce oppression by the French colonizers and their accomplices, the local feudal lords, whose leader, since 1940, was Norodom Sihanouk. Under conditions of uninterrupted repression by the French colonizers and their

local agents, many party organizations in Cambodia were destroyed. For the same reason, after the act of unconditional surrender of fascist Japan was signed in August 1945, no general uprising broke out in Cambodia, unlike in Vietnam and Laos. Power remained in the hands of Sihanouk, who, during the war, had turned from pro-French to pro-Japanese.

The French returned to Cambodia in September 1945 and, once again, Sihanouk accepted the status of French protectorate. It was then, under the leadership of the Cambodian patriotic organizations and with the assistance of the People's Army of Vietnam, that the struggle for national salvation began. Armed units of the Khmer Issarak were set up, whose main bases were the forest-covered mountainous areas. The activities of these formations became widespread throughout the country. Partisan warfare was combined with political opposition. A number of rural areas were liberated in Siem Reap, Battambang, Stung Treng, Kratie, Prey Veng and Svay Rieng provinces together with several areas surrounding cities and provincial centers.

Although the struggle of the three Indochinese peoples had the same objective and was waged on a single front and against a common enemy, in the course of its expansion it became necessary to define a political course and create political organizations which would take into consideration the specific conditions of each of the three countries in Indochina. In this connection, the decision to form three parties, one for each country, was made at the second CPIC Congress, which was held in February 1951. It is thus that the Khmer People's Revolutionary Party (subsequently the People's Revolutionary Party of Kampuchea) was founded on 28 June 1951.

In the traditions of the Communist Party of Indochina, the Khmer People's Revolutionary Party adopted a Marxist-Leninist ideology. It set as its objective to expel the imperialists, overthrow the feudal lords and the mercantile bourgeoisie, make a people's democratic revolution and convert it into a socialist revolution. The KPRP proclaimed itself a component of the international communist movement and the Cambodian revolution a component of the global revolutionary process, in the vanguard of which the Soviet Union was and remains.

One of the party's tasks was to establish a close alliance with the peoples of Vietnam and Laos in the struggle for independence, freedom and socialism. In pursuing this course, the party rallied the patriotic forces, which gave a new impetus to the struggle waged by the Cambodian people against the French colonizers. A congress of people's representatives was held in the liberated areas, in April 1951, at which the Executive Committee of the National Front of Cambodia was elected, headed by Comrade Tu Samut, and a Provisional Committee for National Liberation, headed by Comrade Son Ngok Minh was set up.

In an effort to slander the movement of the people's masses, distort the true objectives of their struggle and undermine the strategic alliance among the peoples of Cambodia, Vietnam and Laos, on 9 November 1953 the French authorities farcically granted "independence" to the kingdom of Cambodia. The party promptly exposed this maneuver and continued to work for the cause of liberation.

The victory won at the historical battle of Dien Bien Phu in May 1954 marked the end of the lengthy and difficult struggle which had brought many trials to the peoples of the three Indochinese countries, and which had been waged in a state of close cooperation on the Cambodian, Vietnamese and Lao fronts. In July 1954 France was forced to sign the Geneva agreements on the restoration of peace in Indochina and the withdrawal of its forces from the peninsula.

According to the Geneva conventions, the Cambodian revolutionary armed formations were demobilized. However, this decision was inconsistent with the actual correlation of forces at that time. At the Geneva conference the Vietnamese delegation demanded that representatives of the revolutionary governments of Cambodia and Laos participate in the talks. It also demanded that a demarcation line be established in Vietnam along the 13th parallel, the creation of two areas in which the revolutionary forces of Cambodia and Laos could be regrouped, and the holding of general free elections in Vietnam, Cambodia and Laos within 6 months.

After the Geneva conference, in an effort to preserve its forces, the party sent a large number of cadre workers for training to North Vietnam. Most of them did so clandestinely, and it was only a small number of party members that continued its legal activities as part of the Pracheachun ("People") group, which published a newspaper under the same title, for the sake of increasing its influence in the country.

At that time, American imperialism, which dreamed of turning the peninsula into its neocolonial possession and a military base, tried to penetrate into Indochina, to replace French imperialism. On 19 May 1955, the Sihanouk government, which intended to follow a pro-American course, signed a military assistance treaty with the United States. Under the party's leadership the movement of the people's masses, involving all population strata, opposing the treaty and American aid, increased and spread. Sihanouk was forced to denounce the Cambodian-U.S. treaty and proclaim a policy of neutrality.

The party's objective at that time was to unify the forces in the struggle against Cambodia's enslavement by American neocolonialism, for which reason it supported the positive aspects of the foreign policy of the Sihanouk government, while continuing to encourage open forms of action by the people's masses for democratic rights and freedoms, against the diktat of the ruling classes and against persecution for progressive beliefs. The party tried to prepare the conditions for moving the revolution to a new stage.

However, many old cadre workers and party members, who had lived in the liberated and rural areas, had become accustomed only to armed forms of struggle and lacked experience in legal activities. This caused difficulties in preserving the purity of the revolutionary movement. The authorities persecuted and engaged in cruel repressive measures against our party. Under these conditions, some comrades, who had failed to realize properly the accuracy of our strategy and tactics at that time, called for mounting a struggle against the Sihanouk government, failing to realize that American imperialism had become the first and most dangerous enemy of the Cambodian revolution.

Under the conditions of an ideological and organizational crisis in the party, a number of opportunists, including Pol Pot and Ieng Sary, who had recently returned from abroad and who could operate legally, seized important positions in the Phnom Penh city and the central party organizations. Strengthening their influence through intrigues and having usurped higher governmental positions, gradually they began to get rid of the true party members and promote in the party opportunists and members of the petite bourgeoisie and the intelligentsia who had no experience in the struggle; they appointed their own people to leading positions on all levels, and promoted a narrow nationalist ideology and antiparty views, particularly among the new party members.

In 1965, returning to his homeland from Beijing, where he had met with Mao Zedong and other Chinese leaders, surrounded by a handful of other leaders, Pol Pot took that party down a reactionary and adventuristic road. He misrepresented many historical facts in order to instill a nationalistic ideology and to undermine the combat strategic alliance between Cambodia and Vietnam. Until 1967 his clique pursued a policy of "revolutionary civil war" aimed at overthrowing the Sihanouk government.

The erroneousness of this course was that it was not aimed against the main enemy and that it praised the armed forms of struggle while the revolutionary cells were still not sufficiently strong for an uprising. This policy caused severe harm to the revolutionary movement. Tens of thousands of party members and other people's fighters died and the support bases of the revolution were severely damaged. All of this led to the increased influence of right-wing pro-American circles in the state apparatus. A coup d'etat took place on 18 March 1970, and Sihanouk was overthrown by the group headed by Lon Nol and Sirik Matak.

The pro-American coup d'etat caused disturbances throughout the country. Profiting from the division within the ruling clique, which had intensified after the coup d'etat, and from the contradictions within the clique, the population in many parts of the country rose to the armed struggle, with the support of Vietnamese volunteers. A number of rural areas were liberated and communications of strategic importance were interrupted. Phnom Penh became isolated. It was then that the United States sent into Cambodia a 100,000-strong expeditionary corps, consisting of American troops and their Saigon puppets. A war broke out in the country, large territories were combed, concentrated bombing from the air was carried out for several months. However, this did not rescue the pro-American regime.

In the spring of 1975, in addition to the intensive fighting in Vietnam and Laos, with the support of the Vietnamese volunteer forces, the armed struggle in Cambodia reached unparalleled scope. As a result of 100-day operations, on 17 April 1975 the Cambodian revolutionary forces liberated Phnom Penh and the territory of the entire country. The struggle against American imperialism and its accomplices ended with the victory of the people's masses.

The 17 April 1975 victory put an end to the colonization of Cambodia, which had lasted 90 years. This victory should have created conditions for achieving the objectives of the people's democratic revolution and for

preparing the grounds for a socialist revolution. However, immediately after the liberation, the Pol Pot-Ieng Sary clique took the path of national treason. It betrayed Marxism-Leninism and inaugurated openly an extremely reactionary domestic and foreign policy.

Raising the slogan of "radical social revolution," the Pol Pot clique expelled the population from the cities, abolished markets and money, closed down schools and temples, tried to make the people forget good national traditions, abolished all democratic rights and freedoms, deprived the people of means of existence, turned the countryside and the provinces into concentration camps and forced the working people to work to the point of exhaustion.

In foreign policy, adopting the doctrine of the "three worlds," the Pol Pot clique depicted friends as enemies and, conversely, proclaimed that it opposes the "two superpowers," which actually meant that it was against the Soviet Union and the other socialist countries. In particular, this group proclaimed Vietnam, which had been our country's combat comrade for decades, "enemy No 1" and started a war against it.

The Pol Pot clique made extensive use of refined torture, destroyed the truly revolutionary forces and fiercely dealt with those who, not obeying its orders, acted in accordance with their own convictions. The leaders of the clique appointed to leading positions in the party and the state all of their relatives and accomplices. The army became a tool for suppressing the people's masses.

During the rule of the Pol Pot regime, which last 3 years, 8 months and 20 days, all revolutionary gains were lost. More than 3 million people were either killed or died of exhaustion. The social structure of the society was totally destroyed. The economic structure, which had reached a low level of development, was destroyed as well. The country was in ruins and the nation was on the verge of annihilation. It was thus that the day of 17 April 1975 became both a landmark of a great victory in the lengthy struggle against foreign aggressors and the beginning of a terrible and tragic period in our 1,000-year old history.

Starting with 1973, some cadre workers and party members began increasingly to realize the reactionary nature of the Pol Pot group. Under the conditions of a strict and rigid control exerted by this group, it was exceptionally difficult to organize any resistance. Those suspected of disloyalty were immediately executed without any trial or investigation.

In 1978 Pol Pot intensified the war against Vietnam. The mass murder of those suspected of disliking the Pol Pot regime continued on an unparalleled scale. Many patriotic people were forced to flee in the jungle and in neighboring fraternal countries. On 2 December 1978 the country's patriotic forces proclaimed the creation of the United Front for the National Salvation of Cambodia. The front published an 11 point political program, aimed at mobilizing the forces of the entire Cambodian people in the struggle against Pol Pot's regime of genocide and the building of a peaceful, independent, democratic, nonaligned Cambodia, advancing toward socialism.

By the end of December 1978 the Pol Pot group suffered its final defeat. Its strongest four divisions, which had invaded the territory of Tay Minh Province in Vietnam, were destroyed. Other units of Pol Pot's army, which had mounted an aggression against Vietnam along the entire length of the Cambodian-Vietnamese border, from Ha Tien to Pleiku, were defeated or took heavy losses. Taking this into consideration, the Central Council of the United Front for the National Salvation of Cambodia decided to mount a general uprising and turned to the Socialist Republic of Vietnam for direct assistance in overthrowing the Pol Pot regime.

Thanks to the selfless, substantial, timely and efficient help provided by the fraternal Vietnamese people and the Vietnamese armed forces and counting on the infinite hatred felt by the Cambodian people toward the regime of genocide, the Pol Pot forces were defeated. The revolutionary forces liberated Phnom Penh and established the People's Republic of Cambodia.

The historical victory of 7 January 1979 was the continuation of the victory of 17 April 1975 and marked the beginning of a new era in the country's history: the era of independence, true freedom and gradual progress toward socialism. Furthermore, this victory defeated the treacherous thoughts of the ruling circles in Beijing, who wanted to use Cambodia as a bridgehead for the implementation of their hegemonic and expansionistic encroachments on the Indochinese peninsula and in Southeast Asia. The 7 January victory is a common victory for the three peoples of Indochina, for socialism and for sensibly thinking people the world over.

However, the enemy did not accept the defeat. The reactionary forces in the area gathered and protected the remnants of the Pol Pot forces and other reactionary Khmers of all kinds and allowed them to set up support bases on Thai territory. It was then that the subversive war fought against the People's Republic of Cambodia began.

In the course of 7 years of hard and stubborn struggle, our people won a number of victories. The peoples of all three countries in Indochina participated in a decisive defense of revolutionary gains. Let us particularly single out the military victory achieved during the 1984-1985 dry season, when all the bases of three reactionary Khmer groups, located along the Cambodian-Thai border, were destroyed. This led to a drastic change in the correlation of forces: the revolutionary forces strengthened their positions while those of the enemy were weakened considerably.

In the course of their recovery, our people achieved some successes and life in the country changed radically. We attained significant results in the production of food. Two-thirds of the areas planted in rice were rebuilt. Some years the rice crop reached as much as 2 million tons, which was roughly the size of the prewar harvests. Compared with the first year of liberation, the herd of cows and water buffaloes doubled and now totals 2 million head. The peasants rallied in mutual aid work groups, the number of which has exceeded 100,000. These groups are a start for organization of the life of the rural working people on a collective basis. Hevea plantations were rebuilt over more than one-half of their previous areas. As we know, rubber is an important item of our exports. Industry, trade, communications,

transportation, the financial and banking systems, and others are being restored. The Cambodian working class, which was believed eliminated under Pol Pot, has been reborn and its numbers are increasing. Currently it numbers 55,000, 60 percent of whom are skilled workers.

We can be proud of achievements in the fields of education, health care and culture. In the 1985-1986 school year we had 1.8 million students. Preschool children's institutions are attended by 55,000 children. Some 900,000 adults are being trained in a variety of skills. The network of medical institutions is developing. Mobile movie theatres are available virtually everywhere. The mass information media--newspapers, journals, radio and television--are making their contribution to the common efforts.

The revolutionary system is strengthening steadily in the center and the local areas. Rebuilding the party politically, ideologically and organizationally was a special assignment. Today we have intensified efforts for its developments, relying on steadily strengthening the close ties between party and people, so that the party may sink deep roots in the country's toiling masses.

These accomplishments clearly prove the power of the Cambodian revolution and the fact that Cambodia will never again go back to the old times despite the subversive activities of enemy groups of all kinds. Our victories are the result of the tremendous efforts of the party, the army, and the entire people. They are also the result of the combat alliance and all-round cooperation among Cambodia, Vietnam and Laos, and the powerful political, moral and material support of the USSR and the other fraternal socialist countries.

The 5th Congress of the Cambodian People's Revolutionary Party, which was held in October 1985, defined the new stage in the development of the Cambodian revolution. The congress analyzed the situation in the country from the liberation to the present and drew lessons from the experience, so as to ensure the further defense of national independence and the building of socialism.

The conclusion was drawn that the historical victory of 7 January 1979, the overthrow of the regime of genocide and the establishment of revolutionary authorities throughout the country marked the completion of the national people's democratic revolution in Cambodia and laid the beginning of the period of the socialist revolution. Considering the weakness of the economic base, the lack of industrial development, which was tremendously harmed as a result of the lengthy wars and the activities of the Pol Pot group, decades will be needed to accomplish the conversion from a people's democratic to a socialist revolution in Cambodia. They will be needed for the rebirth of the Cambodian nation, the rebuilding of its economy, the elimination of the severe consequences of the rule under the regime of genocide and the creation of prerequisites and conditions for a gradual conversion to socialism.

On the other hand, despite their defeats, the hostile forces have not given up their subversive activities against the Cambodian revolution. The enemy's sallies have taken the form of armed invasions and subversive actions in the

areas of economics, ideology and culture. Therefore, a situation of "semipeace, semiwar" remains in Cambodia. The tension and the difficult situation in all areas will obviously remain for a long time to come.

Taking all aspects of the contemporary situation under consideration, the congress defined the strategic task of the revolution: Cambodia's firm defense of national independence and progress toward a gradual transition to socialism; defense of the homeland and revolutionary gains and, which is particularly important, having a revolutionary system, ruled by the working class and all working people, are the primary assignments.

In the socioeconomic area, the congress drafted a policy of rebuilding the economy, changing production relations, restructuring the economic base, laying the foundations of national education and culture, socialist in content, and stimulating agriculture, timber procurement and processing industries and fishing with a view to securing a strong economic base, relying on the production of food, rubber, timber and fish. The development of these sectors must be closely related to that of industry, increasing the production of consumer goods and intensifying exports, and ensuring the gradual building of the material and technical foundations for socialism and a steady improvement in the life of the people.

On the basis of the specific situation and in the interest of using all opportunities for a production upsurge, we charted a political course which stipulates the existence of four forms of ownership within the limits of the overall economic system: state, collective, family and private, in which the state and collective forms will play a leading role.

In order successfully to defend national independence and the gradual advance toward socialism, the people must be educated in a spirit of true patriotism, comradely mutual relations, scientific socialism and proletarian internationalism. It is very important for all people to be educated and have firm technical knowledge and develop in a physically healthy manner. That is why the congress defined the specific steps aimed at the development of education, culture, mass information media, health care and sports.

The party forum clearly indicated the need steadily to strengthen the alliance between workers and peasants, to enhance the role of the United Front for National Construction and Defense of Cambodia and the mass organizations of working people, in order to unite all patriotic and progressive population circles, believers and national minorities, and to involve the middle classes in extensive participation in the defense and building of the homeland. We must undertake a tireless search for corresponding forms of participation by the working people in the administration of the state, the economy and social affairs. This process must take place comprehensively. The task of steadily strengthening the state power was particularly emphasized. The state authorities elected by the people and working for the people must always remain truly national. The state system must have adequate strength to protect the political safety and public order, firmly to defend national independence and the revolutionary gains and have possibilities of rebuilding and enhancing the economy, culture and education with a view to the gradual conversion of Cambodia to socialism. It is our prime obligation to learn to

make efficient use of state organizations and establishments. It is also important for the state authorities on all levels properly to carry out their assigned functions. This applies above all to the organization and management of the economy, for in the area of economic management we are at the beginning stage and are encountering major difficulties.

As to the foreign policy of the People's Revolutionary Party of Cambodia, the congress stipulated most firmly that the combat alliance and comprehensive cooperation with Vietnam and Laos are a prime condition and a mandatory factor of stability and progress of the Cambodian revolution, as it is for all countries in Indochina. That is why we shall strengthen our defense capability and combat alliance and intensify comprehensive cooperation with the fraternal Indochinese countries. We are fully resolved to defeat our enemies and bring their intrigues to naught.

The congress emphasized that strengthening unity and cooperation with the Soviet Union and the other fraternal socialist countries, on the basis of the principles of Marxism-Leninism, is a guarantee for the victorious development of the Cambodian revolution and a structural part of the global revolutionary process.

The congress proclaimed that the People's Republic of Cambodia is prepared to establish friendly relations and cooperation with the countries in the area and all countries in the world despite differences in political systems and on the basis of mutual respect, independence, sovereignty, territorial integrity, equality and mutual benefit. Together with the SRV and the Lao People's Democratic Republic, the People's Republic of Cambodia is ready to begin talks on solving the problems existing between the countries of Indochina and ASEAN and to assist in making Southeast Asia a zone of peace, stability, friendship and cooperation.

We firmly object to the extremely reactionary and militaristic policy of American imperialism, which is continuing its unrestrained arms race on an unparalleled scale, preparing for nuclear war and threatening the peace and security of all peoples. The unfriendly policy pursued by China toward people's Cambodia and other Indochinese countries, which contributes to the preservation of tension in this area, is extremely regrettable.

Measures were formulated at the congress aimed at making the KPRP a truly Marxist-Leninist party, the vanguard of the Cambodian working class. The KPRP must become a party brimming with revolutionary resolve, a party which is organizationally united and guided by a proper political line, closely related to the people, and loyal to the working class and all working people in Cambodia and to the principles of proletarian internationalism.

The implementation of all of these tasks will demand of us a great deal of efforts. We face two problems above all: the political, ideological and organizational strengthening of the primary organizations and enhancing the standards of knowledge and competence of senior workers of the apparatus centrally and locally. The new membership of the KPRP Central Committee, which was elected at the 5th Congress, consists of 31 members and 14 candidate members of the Central Committee. It was renovated by one-quarter, which

guarantees the combination in the work of the supreme leading party body of the principles of continuity and renovation.

Delegations from 13 fraternal parties participated in the proceedings of the 5th KPRP Congress. Some 50 telegrams of congratulations were sent to the congress by communist and worker parties, expressing the warm feelings of communists, workers and working people in many countries and their support of the just cause of the Cambodian people.

We have a long way to go and we must surmount a number of difficult trials. The enemy has still not abandoned his treacherous plans aimed against our revolution and against the three countries in Indochina. Furthermore, we have shortcomings and make errors. However, the Cambodian revolution will advance steadily and the enemy forces will suffer their final defeat.

Along this long and difficult road the Soviet Union has always been and will remain for us a source of belief and inspiration, a guideline in our progress toward a bright future. Cooperation between the USSR and the People's Republic of Cambodia is increasing in all areas with every passing day; the Soviet state is increasing its aid, which is a tremendous contribution to the defense and building of our homeland.

We highly rate the noble activities of the Soviet Union in the struggle for the preservation of the peace and happiness of all peoples on earth. We fully support the 15 January 1986 declaration of M.S. Gorbachev, CPSU Central Committee general secretary, which formulates a program for the total elimination of nuclear weapons by the year 2000. We also support the 23 April 1986 Soviet government declaration on the situation in Asia and the area of the Pacific Ocean and its suggestion of turning this area into a nuclear-free zone, a zone of lasting peace, stability, security and cooperation.

We warmly welcome the brilliant results of the proceedings of the 27th CPSU Congress. Its decisions are of great importance not only to the party and the people of the Soviet Union but also to Cambodia and the revolutionary and peace-loving forces the world over. We wish the fraternal Soviet people new victories in building communism and successfully implementing the resolutions of the 27th CPSU Congress.

On behalf of the party and people of Cambodia, allow me to express my profound thanks and best feelings to all Soviet communists and all citizens of the USSR.

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## LESSONS OF THE GREAT PATRIOTIC WAR AND THE USSR's STRUGGLE FOR PEACE

Moscow KOMMUNIST in Russian No 11, Jul 86 (signed to press 23 Jul 86) pp 104-113

[Article by Academician B. Ponomarev]

[Text] The existence of imperialism, which is still dominating a considerable part of the globe and, above all, its preparations for new wars and possession of nuclear weapons make it necessary to turn once again to the 45th anniversary of the attack mounted by German fascism on the USSR and the start of the Great Patriotic War. To this day, the Soviet people and their allies and friends recall and note this date above all for the sake of preventing a new war. The broad popular masses, particularly the participants in the antiwar movement, are becoming increasingly aware of the direct link and continuity between the heroic struggle waged by the Soviet people for the liberation of Europe from Hitlerite oppression and the tremendous efforts being made by the USSR today to prevent a new war. In this struggle the Soviet Union is implementing the foreign policy strategy which was formulated at the 27th CPSU Congress.

The current international situation has become significantly aggravated. Imperialism has comprehensively enhanced its aggressive actions and intrigues against the land of the soviets in all areas. The arms race is continuing; ever more monstrous means for the destruction of people are being perfected. The responsibility for this is borne above all by the ruling circles of the United States.

"Imperial ideology and politics and the wish to put socialism and the USSR under maximally adverse foreign conditions alone favored the start of the nuclear and other arms race after 1945, precisely when it seemed that the defeat of fascism and militarism offered a real possibility of building a world without wars..." M.S. Gorbachev emphasized in the CPSU Central Committee political report to the 27th Party Congress.

After 1945 the United States established a widespread network of military bases and projects throughout the world, above all in many strategically important areas. Today the United States has 1,500 military bases and facilities on the territory of 32 countries. The largest 360 bases, located in 22 countries, include missile, air force and naval bases, depots of nuclear

weapons and conventional armaments, communications centers and a variety of intelligence agencies. Their permanent personnel exceed half a million American military. The largest number of American bases are located in Western Europe, including the FRG, Great Britain, Italy and Greece, which account for more than 200 large military bases. As many as 60 American military bases are located in Turkey. In recent years the United States has developed its network in the Near and Middle East, which it has proclaimed a zone of its "vital interest." As we know, Israel has granted the United States unrestricted use of military bases on its territory. Diego Garcia Island had become the largest U.S. air force and naval base in the Indian Ocean. The second most powerful group of American armed forces is deployed in the Far East and in the western Pacific.

Appropriations for preparations for war and armaments in the United States are increasing more than in any other country in the world and have reached huge amounts. Whereas in 1945 military expenditures based on the national defense program totaled \$83 billion, they had reached \$134 billion in 1980 and exceeded \$300 billion in 1986.

Urged on by the aggressive circles, the endless armament process has led to the fact that the threat to the existence of civilization has reached an unprecedented level. By the fault of imperialism today mankind has reached a turning point beyond which events could get out of control.

According to the experts, today nuclear stockpiles in the world are sufficient to destroy all life on earth several times over. At least 50,000 nuclear warheads have been stockpiled. Western Europe is saturated to the hilt with nuclear weapons. It contains about 7,000 nuclear warheads and thousands of means for their delivery, and their numbers are increasing.

The British and French nuclear potentials are increasing. Furthermore, the NATO forces in Europe have adopted the type of armaments the destructive power of which make them comparable to low-power nuclear weapons (vacuum, cassette, napalm and others). The FRG Bundeswehr alone has nearly 1,200 combat weapons (missiles, airplanes, guns) capable of delivering nuclear charges. The last restrictions on the development of nuclear weapons have been lifted from the FRG. This was done by the governments of countries whose peoples cannot fail to recall the tragedy of World War II, which was unleashed by Hitlerite fascism, and the suffering they experienced.

The number of countries who can acquire nuclear weapons is increasing with every passing year. The number of people empowered to handle nuclear weapons is increasing in the armed forces of the United States and the other NATO countries. All of this increases the likelihood of a nuclear war accidentally breaking out as the result of misuse or accident.

The extremely dangerous nature of a nuclear war and its consequences to all mankind have been convincingly proved by modern science. The use of even a small part of available nuclear arsenals, according to competent world scientists, would have irreversible climatic and ecological consequences, such as a drastic drop of temperature throughout the world by dozens of degrees. According to the specialists, this would cause a "nuclear winter."

Meanwhile, the accumulation of mountains of weapons is increasing. In the past 2 to 3 years a qualitatively new feature in the insane arms race appeared, Reagan's so-called "Strategic Defense Initiative," or, more accurately, a "star wars" program, a plan for the militarization of space. Accelerated efforts are being made to implement this program, the purpose of which is to acquire, in addition to nuclear weapons, new means of warfare, such as assault space armaments. Should this occur, the threat of nuclear war would increase greatly.

American imperialism has turned the North Atlantic Bloc (NATO), which has 16 member states, into its active and powerful tool. From start to finish its activities are directed by the United States. American generals have invariably been supreme commanders in chief in Europe and the North Atlantic.

NATO policy is structured in accordance with American military doctrine. The latter is based on the possibility of using nuclear weapons first and winning a nuclear war. It is precisely for this purpose that the American leaders of the bloc are urging on the arms race and favoring the development of ever new types of weapons. The NATO bosses are constantly demanding of the member countries to increase their military budgets. According to available data, the military expenditures of member countries have been in excess of \$4 trillion since 1949.

The U.S. Department of Defense recently published its annual report, with a preface by Weinberger, the Pentagon's manager, which stipulates that since 1957 more than 200 agreements have been signed with America's allies on the development and production of various weaponry systems.

NATO is the embodiment of militarism in the contemporary world. Its supreme authority is its council, whose decisions are considered mandatory to member countries and need no parliamentary ratification. The actual situation is such that this military bloc violates the state sovereignty of member countries. The bloc's leadership makes decisions, dictated by the Pentagon, on the most important problems of war and peace, the quantity and quality of armaments and their usefulness or uselessness. The course and the trend are those of increasing armaments as much as possible, extracting ever more money for this purpose and ignoring the opinion of the people's masses, their needs and their interests.

By the end of the 1970s the NATO military planning committee adopted a long-term armament program for the 1980s. The program calls for increasing and modernizing all types of armed forces in Europe. This was followed by a session of the NATO Council, at which the decision was made to deploy 572 new American medium-range nuclear missiles in Western European countries (Pershing-2) and land-based cruise missiles. Naturally, these missiles increased the threat of war and worsened tension in Europe and elsewhere in the world.

NATO has developed a huge propaganda apparatus, the purpose of which is to whitewash its aggressive activities with the help of radio, television, the press and special envoys who visit the different countries. Huge funds are being spent on propaganda.

The American administration claims again and again that it relies on its own strength alone in solving all international problems. Thus, in his 26 May speech delivered on the occasion of the "Memorial Day for the Boys Who Died in Vietnam," President Reagan said: "If we indeed wish peace, we must be sufficiently strong...and use our strength."

In his 27 May declaration on the actual rejection by the United States of the observance of the Soviet-American Salt-II Treaty and the temporary accord (Salt-I) and in confirmation of this position, the President presented an entire program for the further increase of armaments on land, sea and space. He said that the United States will implement a "plan for modernizing offensive strategic armaments to the fullest extent." This statement by the U.S. President revealed the true face of the American administration.

The picture of the contemporary world with mountains of armaments and the prospects of mankind would have been dark had there been only imperialism and NATO on earth, with their policy of force and diktat and desire to rule. However, the contemporary world includes other forces and well, other sociopolitical systems and other policies. The 27th CPSU Congress offered mankind a different future. It formulated a program for the elimination of nuclear war, a path to lasting peace and security for the nations. "The forces of peace and progress throughout the world can neutralize the threat coming from imperialism. They can stop the world's sliding toward the brink of the nuclear precipice, they can prevent turning outer space into a battlefield," the congress' resolution stated.

A specific substantiated program for ensuring the safety of the peoples was formulated in the political report presented by M.S. Gorbachev at the congress, aimed at the implementation of this great historical objective. It is based on the most important principle that in the nuclear age any conflict among countries and contradictions between the socialist and capitalist global systems cannot be resolved by military means, through armed struggle. Life imperatively raises the question of mankind's survival. The Soviet Union, on whose banner the words "socialism means peace" are inscribed, is offering a broad program in the struggle against the arms race, for talks and other measures of a peaceful nature. It is essentially a program for the salvation of mankind from nuclear destruction.

The program includes the following stipulations submitted by the USSR and its allies in the past 6 months:

1. Ending nuclear tests. The Soviet Union has applied unilaterally a moratorium on nuclear explosions. It has proposed an immediate initiation of talks on a total ban on nuclear tests.
2. Total elimination of nuclear weapons by the end of this century and preventing the creation of nuclear assault armaments (SDI).
3. Elimination of Soviet and American medium-range missiles in the European zone.

4. Eliminating in this century chemical weapons and industrial facilities for their manufacturing.
5. Reducing armed forces and conventional armaments in Europe, from the Atlantic to the Urals.
6. International cooperation in the utilization of space for peaceful purposes, for the benefit of all mankind.
7. Providing reliable control over all stages of disarmament through national means and international procedures, including on-site inspection.
8. Creation of a comprehensive system of international security of the peoples, covering the military, political and economic and humanitarian areas.

All of these proposals come from the powerful Soviet Union, which has a corresponding arsenal of armaments. The USSR and the United States have arms parity.

The Soviet leadership proclaims to the entire world that our country is doing and is prepared to do everything possible and necessary for the preservation of peace and reduction of armaments but will not allow a violation of the military-strategic balance or unilateral advantages. The USSR favors a radical drop in the level of military confrontation and a reduction of military potentials.

The Soviet decision to extend the unilateral moratorium on nuclear tests until 6 August 1986 was a real step toward a reduction of nuclear weapons. It was welcomed by all peace-loving forces with tremendous enthusiasm. A large number of governmental leaders, West and East, welcomed this Soviet step. This step, which once again proves the peace-loving nature of the land of the Soviets, allows the broad popular masses everywhere to demand of the United States an end to nuclear tests.

We must point out that the recent Soviet proposals not only encompass and include initiatives and peace-loving suggestions which the USSR has been making essentially over many years, starting with 1945, but also indicate a new approach, a new way of thinking and acting in the nuclear-space age.

In addition to proposals aimed at restricting and limiting all types of weapons, the CPSU and the Soviet state are engaged in constant energetic efforts in the defense of peace and security of the peoples in all other areas of international relations. This includes summit meetings, in the course of which leading foreign personalities acquire first-hand reliable information on Soviet foreign policy and tremendous long-range plans for peaceful construction. This also includes discussions by the USSR Supreme Soviet and its commissions with members of parliament of different countries.

Extensive reciprocal contacts are being developed with communist, social democratic and other political parties. Similar contacts are being established by the trade unions, the Committee for the Defense of Peace and other public organizations, which hold domestic and international meetings

with the participation of universally known scientific and political leaders and address appeals, above all to the American administration, on ending nuclear tests, abandoning the militarization of space and taking other steps to reduce armaments. Daily intensive diplomatic work is taking place and contacts are being maintained with all countries on earth.

In recent years the USSR Supreme Soviet, the supreme Soviet authority, has frequently addressed appeals to governments, parliaments and peoples throughout the world. Such appeals indicate profoundly and substantiatedly the nature of Soviet peaceful foreign policy; specific suggestions on the reduction and elimination of all types of armaments are being formulated on a profound basis and with awareness of full responsibility; a program of steps for the prevention of war has been suggested.

The USSR Supreme Soviet solemnly states that the Soviet Union threatens no one. It does not aspire to confrontation with any country, West or East. The Soviet Union had neither aspired nor is aspiring to achieve military superiority. It has not been and will not be the initiator of new rounds in the arms race.

Briefly, the Soviet Union is doing everything possible to safeguard peace.

Reality has confirmed that an increasing number of countries and representatives of the people's masses are becoming convinced of the peaceful nature of the USSR and the absence of a "Soviet military threat" to the West and the East.

The other members of the socialist community are marching hand-in-hand with the Soviet Union. The socialist states launched a new initiative at the recently held (10-11 June) conference of the Political Consultative Committee of Warsaw Pact Members, calling for a significant reduction in the armed forces and conventional armaments in Europe (from the Atlantic to the Urals). The unity and creative cooperation which enrich socialist international policy, making it even more substantive in its activities in the world arena, were manifested at the Budapest meeting. The decisions which were made are a major contribution by the socialist countries in the struggle for improving the international situation.

Frequently, unexpected and profound confirmation of the accuracy of Soviet policy is provided by world events, a policy aimed against atomic armaments. The accident at the Chernobyl Nuclear Power Plant once again drew the attention of all people to the tremendous power of the atom and its threat to the people, should it become uncontrolled or used in nuclear weapons. In order to make use of the energy of the atom for peaceful purposes and protect the people from unexpected nuclear power plant accidents, on 14 May the Soviet Union suggested a specific program for joint action by countries using nuclear power plants for the creation of a system of internal and external safety in the utilization of nuclear power stations. This highly humane act was gratefully welcomed by many countries and provides a key to the proper, safe and peaceful utilization of nuclear power.

The United Nations proclaimed 1986 a year of peace. Quite significantly, this coincides with the 45th anniversary of the outbreak of the Great Patriotic War. The UN decision reflects the concern of the peoples related to the threat of war and appeals to them to counteract the sinister and aggressive forces which are leading mankind to the brink of the precipice.

It is important for all reserves and possibilities to be used in the course of such an important step as the Year of Peace and for the voice and will of the peoples in defense of peace to be embodied in specific peaceful acts.

The inordinate expansion of the social base of the antiwar movement is confirmed by all available facts. It involves the participation of many political parties, including social democratic and communist, influential parliamentary and church circles and noted personalities in the youth and women's movements.

The working class is a powerful force. It is the main producer of all material goods used by the people's masses. However, it is with its hands that armaments are being produced in the capitalist countries by the military-industrial complex, aimed at the destruction of people.

The appeal to the minds and hearts of the working class and tireless work among its organizations and explaining the consequences of nuclear war and the suggestions formulated by the Soviet Union, which could save mankind from war, are called upon to play an exceptionally important role in achieving this great objective.

Today an unparalleled politicization of the population in capitalist countries is taking place. We can see the increasing invasion of the masses into the area of foreign policy. The point is that never before have the peoples so clearly realized the fatal consequences of war, nuclear war in particular. Today the truth about wars has been told to the people by scientists of world renown, by the greatest political personalities, international organizations and political parties in many countries.

With its open and unrestrained adventurism, American imperialism triggered the indignation of the peoples, who are angrily condemning the imperialist policy of force, a policy of aggression.

The American administration is opposed by many countries on other problems as well. Last spring an international conference of experts on relations among people took place in Bern. A final declaration of a positive democratic nature was drawn up through joint efforts. However, the U.S. delegation vetoed it and the document was not adopted. The bourgeois newspaper JOURNAL DE GENEVE wrote on this occasion that "the United States has pitted itself, unquestionably, against all of Europe."

Discontent with and opposition to the aggressive course pursued by the ruling circles are growing among the American people. They are concerned by the growth of anti-American feelings in the world and are feeling the growing international isolation of the United States and the displeasure of some of its allies. The people are aware of the power of the Soviet Union and the

entire socialist community. All of this is contributing to the increase in antiwar feelings.

The great strength of the Soviet position lies in the fact that the USSR is promoting not only the safety of its own people but the safety of all nations--universal safety. The peoples are becoming increasingly convinced that the falsehood of the "Soviet military threat" is merely a screen behind which weapons are being stockpiled and military adventures prepared.

Today we cannot say as yet that the antiwar movement has already erected a firm barrier to the arms race and the threat of war. However, the bearers of such danger, the "hawks" across the ocean and in NATO, are concerned by this and are forced to realize that the broad population strata understand the threat of their "hawkish" policy. It is particularly this understanding of the great threat by the simple people that forces the "hawks" to speak with increasing frequency of their "love of peace," "desire for peace," etc. Such peace-loving demagogic has become a structural component of a policy of aggression and stockpiling of weapons. However, there is a great disparity between the words and the actions of the American administration. Since, acting against the will of the peoples, the United States is continuing its nuclear tests and the SDI program is being implemented step-by-step, the broad popular masses are increasing their efforts against armaments and all war preparations.

Under these circumstances, the Soviet Union is persistently and consistently promoting the implementation of the concept of universal security, expressing its readiness to engage in a dialogue and reach solutions which would be based on the equal security of the participating sides. The party's and government's leadership is formulating new suggestions and initiatives and displaying a new way of thinking consistent with contemporary requirements and an innovative approach to all problems of international life. It is doing literally everything it can to prevent war and to secure the application of the principle of peaceful coexistence among countries with different social systems. The great dynamism of Soviet foreign policy and its positive impact on the international situation are noted throughout the world. No one can say that this is aimed against any other country or nation.

It is important for all countries and peoples in the world to draw lessons from the war which ended in 1945 and draw proper conclusions from its results and subsequent developments. The nature of the international situation and the assessment of the correlation of forces in the world today proved that the supporters of aggression and a policy of force must, before it is too late, master some unavoidable truths.

First, should a nuclear war be unleashed by the aggressor, it will not spare its initiators, including the ruling circles of imperialism and NATO. Whereas in previous wars U.S. territory was out of reach to the armed forces of the enemy, today the situation has changed radically. The bosses of the military-industrial complex and the bearers of militarism cannot find safety across the ocean. In the past they could send their armies outside America while themselves remaining the rear, with no risk to their life. Today no such

opportunity will be granted to them by the nuclear missiles. Such weapons are equally dangerous to those who go to war and those who sent them to war.

Second, it should be remembered that on the eve of World War II, in emphasizing the fascist threat hanging over mankind, the Soviet Union called for the unification of all forces to oppose it. The USSR called for concluding a mutual aid treaty according to which the USSR, Britain and France would help each other, should Hitlerite Germany commit aggression against them or against Poland, Romania, and the Baltic and other countries. The adoption of the Soviet proposals would have made it possible to pit against Germany a large coalition of European countries and could have prevented aggression. However, the Western states relied on aiming the strike by Hitlerite Germany at the USSR, and thus letting others pull the chestnuts out of the fire.

As we know, these hopes of the bourgeois governments of Britain, France and Poland failed, and it was these countries that Germany attacked first. The French, Polish and English peoples paid a heavy price for the treacherous policies of their governments. It was only the defeat of German fascism by the Soviet armed forces in 1945 that rescued from fascist oppression, or the threat of it, the peoples of these and other countries.

Today as well the policy of the "hawks" across the ocean, who are members of NATO, is aimed at the use of the armed forces of the European countries in the interest of American imperialism. The propaganda about the "defense" of Europe from the "Soviet threat" and communism is a repeat of Goebbels' propaganda, which was used to mislead the European countries in 1938-1939.

Third, the main task which the White House sets itself in increasing its armaments and pursuing a policy of force and diktat, is to halt the process of progressive social changes in the world and prevent revolutions. However, it should remember that imperialism failed to accomplish this even with the help of two world wars. Conversely, as the result of World War I conditions appeared for the victory of the Great October Socialist Revolution and the founding of the first socialist state in the world, the USSR. World War II created grounds for the collapse of the capitalist system in 11 European and Asian countries. The world socialist system was founded. Consequently, two world wars brought about not a strengthening of the positions of imperialism but their significant weakening, starting the decline of imperialism.

After World War II social changes throughout the world developed more rapidly and decisively than ever before in the history of mankind. The colonial empires crumbled, replaced by tens of young states which gained national independence. A strong nonalignment movement appeared.

Today many leaders, above all the representatives of the six countries which signed the New Delhi declaration, are actively opposing imperialist preparations for war and demanding a halt to the arms race, nuclear above all, on earth and its prevention in space. They support the Soviet proposal of ending all nuclear tests.

The nonaligned countries have a tremendous potential strength and possibilities. They number nearly 2 billion people. All of them are

profoundly and objectively interested in putting an end to armaments and using the huge funds spent in the production of weapons for death to solve their urgent needs, such as the elimination of hunger, disease and infant mortality and other calamities which are the legacy of colonialism.

The active efforts of the nonaligned movement are called upon to play a major role in rescuing mankind from nuclear war.

According to an oriental saying, "If all the people take a breath together a storm would break out." This should be a serious warning to the supporters of armaments and the use of nuclear weapons.

Fourth, the very important lesson from the battle waged by the Soviet Union against Hitlerite Germany is that the vitality and invincibility of socialism, the socialist state and the Soviet people were demonstrated to the entire world. This victory proved the superiority of the socialist over the capitalist social system and the superiority of Soviet military science and art and communist morality over barbaric fascist policy and ideology. The unparalleled and mass heroism displayed by the Soviet people triggered the most profound gratitude of all democratic freedom-loving forces in the world.

Such was the case in 1945. Since then the power, strength and prestige of the Soviet Union have increased greatly. The military-strategic parity between the USSR and the United States and between the Warsaw Pact and NATO are the most important factor in restraining aggressors of all hues and ranks.

The 1 June 1986 Soviet government declaration reemphasizes that the USSR will not allow the United States to gain military superiority over it and "will take the necessary practical steps to prevent the undermining of military-strategic parity." Historical experience proves that the Soviet leadership does not waste words.

The tireless struggle pursued by the Soviet Union for the cause of peace and its proposals on reducing armament and totally eliminating nuclear weapons are today widely known by millions and millions of people and are triggering feelings of profound sympathy. The eyes of the people are hopefully turned to the main antiwar force--the land of the soviets--and the desire is developing among the peoples actively to struggle against the sinister plans and actions of American imperialism and NATO. This potential of sympathy for the Soviet Union is increasing further and further. The main reason for this is that objectively, by their very nature, the interests of the USSR in defense of peace and salvation from nuclear catastrophe coincide with the interests of all nations.

That is why it is entirely justified to increase and generate new common efforts for the prevention of war and halting the arms race on earth and in space and, above all, ending nuclear tests.

The CPSU program provides a comprehensive assessment of the correlation of forces in the world and indicates the way of preventing nuclear war and the salvation of mankind. It emphasizes that "establishing military-strategic parity between the USSR and the United States and between the Warsaw Pact and

NATO was a historical accomplishment of socialism. It strengthened the positions of the USSR, the socialist countries and all progressive forces; it defeated the hopes of the aggressive imperialist circles of winning a global nuclear war. The preservation of this balance is a major factor in ensuring peace and international security."

Therefore, preserving this balance and strengthening the land of the soviets in countering the aggressive course of imperialism and in the dedicated defense of peace, a counteraction with the Soviet Union pursues tirelessly, is consistent with the profound and vital interests of all nations. That is why the policy of the USSR enjoys the support of all people of goodwill.

Yet another truth is that the time when imperialist rulers could unleash wars and kill people with impunity has gone forever. As we know, the fascist bosses committed monstrous crimes for the sake of establishing their domination. This time, however, the culprits suffer deserved and harsh punishment. The entire Hitlerite clique was eliminated. The international tribunals in Nuremberg and Tokyo, which included the members of the anti-Hitlerite coalition, exposed the crimes of the war criminals and sentenced them. The international public has frequently turned to these facts, by warning of their responsibility those who are preparing new wars. "We believe that a government which will be the first to use nuclear weapons against any other country....will be considered a war criminal." This was stipulated in the 1950 Stockholm appeal signed by more than 500 million people.

Twice on the motion of the USSR the United Nations organization has passed similar resolutions.

All of this must be understood by those who are relying on continued testing of nuclear weapons and their advancement, who favor putting nuclear arms in space and are preparing to use them.

Finally, it should be remembered that the Hitlerite clique and its partners prepared and unleashed the war under the sign of the struggle against communism. Throughout its life and until its defeat, fascism waged a fierce anticommunist campaign. The Hitlerite clique depicted itself loudly and persistently as the savior of capitalism from the "communist and Soviet menace."

Actually, this was a screen concealing the aggressive policy aimed at German fascist domination over the world. That is why when the people's masses hear today propaganda from across the ocean on the "Soviet military threat" and the "crusade" against communism, it is very important for them objectively to see what this actually conceals. What is concealed is nothing other than the aspiration to world rule.

The American administration must understand that it is time to abandon groundless hopes and illusions of achieving military and nuclear superiority over the Soviet Union. It must display a realistic approach to the Soviet proposals and measures aimed at halting the arms race on earth and preventing it in space. This is demanded by the people's masses of all countries.

To us, Soviet people, the conclusion from all this is the following: the greater the contribution of every worker in industry, agriculture and science to the acceleration of the country's socioeconomic development is, the greater will the economic and defense power of the USSR become and the stronger will be our positions in the international arena and in the defense of the peace and security of the peoples.

The June Central Committee Plenum unanimously approved the work and resolutions of the Political Consultative Committee. In adopting its 12th 5-Year Plan, the CPSU Central Committee turned with an inspired appeal for the development of creative efforts to implement all great planned assignments. We shall work in such a way that the Soviet people may lead a richer material and spiritual life, for the country's economy to strengthen steadily and for its defense shield to become stronger.

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## THE TIME FACTOR IN THE NUCLEAR AGE

Moscow KOMMUNIST in Russian No 11, Jul 86 (signed to press 23 Jul 86) pp 114-123

[Article by Yu. Zhilin]

[Text] Forty years ago, on 19 June 1946, the Soviet Union submitted for consideration by the UN Atomic Energy Commission a draft international convention on banning the production and use of weapons based on nuclear energy, for purposes of mass destruction. We must recall this not for the sake of marking a round-figure anniversary. The time itself which has elapsed since the task of rescuing the world from nuclear weapons was formulated for the first time, leads to serious thoughts.

In our days the factor of time in solving problems of war and peace and, even more so, of preserving, of saving life on earth, has assumed critical significance. The summed up assessment of the importance of this circumstance provided at the 27th CPSU Congress, reflects the new global reality facing mankind. Under the conditions of the combat readiness of a huge quantity of nuclear weapons, time and space lose their ordinary aspects in terms of civilization.

The space inhabited by mankind--our planet--has been narrowed to a single dot under the threat of a fatal outcome--a thermonuclear catastrophe. Differences between geographic and political regions disappear in the face of a common alternative: self-preservation or self-destruction of the human species.

But what about time? We know from philosophy that eternity exists only in nature as a whole and that each specific form of existence in nature is transient. However, this philosophical postulate can by no means be considered a consolation, serve as an explanation or, even less so, be used to justify events.

The spasmodic and irregular nature of the flow of time in human dimensions has acquired a new facet. The qualitative change in the means of warfare has brought about the appearance of a particular dependence of the existence of mankind not on space or geological catastrophes but on the creations of its own hands. Man has become the "ruler of his destiny" in the most unexpected and worse meaning of the term. Today he determines not only the quality of

his own life but life itself and possibly, the existence of animate nature on earth. However, the critical significance of the time factor cannot be reduced to this alone. The arms race urged on by the militaristic circles of imperialism is increasingly taking mankind to a point at which one must stop, for if crossed, it would find itself in a situation in which the process of military-political destabilization in the world arena would assume an irreversible nature. The question of the limits and future developments of the human species in time has been directly and quite specifically included in the present-day agenda.

"Never before in the history of mankind has such a problem arisen," wrote M.S. Gorbachev to Professor M. Marua, head of the International Life Institute. "It appeared rudely and clearly, with fierce mercilessness, on the most practical level. No one can ignore it, for it affects all of us."

This burning problem, in the full meaning of the term, raises a number of questions of conceptual, moral, political and, finally, military-technical nature. In order to find their answers we must clarify, above all, the origin of the problem: the way it was born, the stages it crossed in its development and the alternatives its offers today. It would be inaccurate, not to mention absolutely erroneous, to consider the threat caused by the nuclear-space age as something primordial and inevitably given by the very course of the scientific and technical revolution in military affairs.

"Thinking the unthinkable" leads some nuclear adventurists to the elaboration of prospects based solely on retrospect: in a sense, a nuclear war has already been fought, "everything has sorted itself out," one can conceive of such a war in the future, not necessarily turning into a universal cataclysm.

Yes, the bombing of Hiroshima and Nagasaki were, naturally, "the continuation of politics by other means." However, neither the power of the atom bombs nor their available quantity at that time can be compared with what is currently being stockpiled in nuclear arsenals. In August 1945 mankind received a terrible warning signal. However, political awareness at that time was not in step with the new reality of political life. Furthermore, this new reality, as it appeared to the nuclear maniacs, provided another opportunity to influence the course of history in the desired direction. "Nuclear diplomacy" appeared. The very concept of relying on nuclear weapons in attaining political objectives began to play an increasingly sinister role.

Time passed and with it the nuclear arsenals increased; progressive social awareness and understanding of the threat they represented to mankind should they be used increased as well. However, even 15 years after the first nuclear explosions "optimists" could be found among the political leaders, who thought as follows: if half of mankind would perish at war it is of no importance. Nor would it be terrible if only one-third of mankind remained.

Let us abstract ourselves from the political-ethic assessments of such considerations. The nuclear train, however, since then has rushed far ahead. Now it has been proved strictly scientifically that such a large number of nuclear weapons have been stockpiled that they can destroy all mankind several times over, although a multiple destruction is impossible....

Nuclear war objectively became unacceptable to all as the solution of contradictions in the world. Strictly speaking, today there could not even be a question of nuclear war as a means making the attaining of any political objective possible, or as the form of armed confrontation in which someone would prevail and someone else would be defeated. It cannot become a war in the traditional meaning of the term, for it would have neither winners nor losers, for, in the final account, there would be no one left. The question is the following: How has mankind "arrived at this kind of life?"

Politics is the art of the possible. This is a controversial definition which somehow directs states, parties, social movements and political personalities toward drawing strength in the present, in existing circumstances, and finding levers for advancing toward a desired future. The political past and political history have been woven into a single fabric with opportunities which were used and implemented and opportunities which were lost, wasted. Both are equally instructive in their own way. However, the used opportunities are accepted by the human heart as a self-evident gift while lost opportunities continue to "sting maliciously." However, even the latter cannot be handled with various psychological tranquilizers. The consequences of some very essential opportunities which were lost in the past heavily press on the present and the future of mankind. It is precisely the rather long series of omissions which have raised with such unparalleled gravity the problem of survival in its entire depressing reality.

As the familiar expression goes, history repeats itself: the first time it comes out as a tragedy and the second, as a farce. However, it can be said that the repeat does not always bring up an old event in its jocular garb. In the nuclear century the history of lost opportunities is repeated with a multiple increase in the tragic potential of omissions.

Let us draw up a very partial list of such omitted opportunities.

First. The proposals made 40 years ago by the Soviet Union stipulated that the participants in the convention would assume the obligation not to use nuclear weapons under any circumstances, that the production and storing of such weapons would be banned and all its stockpiles destroyed within 3 months.

How clear and simple the suggestion was! How greatly the course of history would have changed, had it been adopted! Naturally, such history would not have developed smoothly or been conflict-free. However, it would not have been a history of a nuclear arms race. It would not have led us to an unprecedented situation in which the very history of human civilization is threatened by a catastrophic end. At that time the problem of eliminating such armaments could have been solved incomparably more easily for the very reason that no more than a few nuclear charges existed.

Today the main reason used by Washington to justify its program for increasing armaments is the assertion that the Soviet Union has outstripped the United States in one area of military rivalry or another. This is a false argument. Its falseness is particularly obvious in the light of the contemporary history of the arms race: during the first postwar years the United States not simply had superiority but even the monopoly on nuclear weapons. What prevented it

from using this advantage for the sake of preventing the nuclear arms race from the very beginning? It was precisely this advantage with which it was unwilling to part. The United States, which had the monopoly of nuclear weapons, was unwilling to lose the opportunity of using it as a means of political blackmail or direct military use with a view to asserting American hegemony over the world.

Meanwhile, in the autumn of 1949, the Soviet Union tested a nuclear explosion. This exploded the U.S. monopoly on nuclear weapons. Did this fatally predetermine the nuclear arms race? It did not. In 1949 as well the Soviet government proclaimed that although it had nuclear power, it "stood and intended to stand in the future on its old position of unconditionally banning the use of nuclear weapons." Therefore, it would have sufficed at that time for Washington to make a countermove for the nuclear threat to be eliminated from international life. That opportunity was lost. Washington chose to engage in a nuclear arms race. It proceeded from the fact that it could not abandon the advantages which, in its opinion, existed if not on having the monopoly on nuclear bombs but being ahead in the stockpiling of such weapons and in perfecting means for their delivery to the target. It was unwilling to waste this opportunity but it wasted others: saving the world from the threat of nuclear war and thus eliminating the unparalleled threat which was hanging on the national security of the United States itself.

Second. The threat of war assumed a qualitatively new character after both countries developed thermonuclear weapons in 1953. In this situation as well the Soviet government once again emphasized the need to ban their use and to establish strict control over such a ban within the framework of the United Nations. The American administration ignored this appeal as well. The reason was the same: it was unable to abandon the maniacal idea of military superiority as though it were a congenital vice. Yet already then that idea was supported by certain realities: in 1948 Western Europe undertook to deploy American theatre nuclear forces. The implementation of the American program for building intercontinental strategic bombers and nuclear submarines was launched in the middle of the 1950s. Although the Soviet Union possessed nuclear weapons, the geographic position of the United States triggered in Washington a feeling of invulnerability with the temptation of threatening the other side. Once again the aspiration to achieve hegemony blinded the military-political leadership on the other side of the ocean and prevented any hope for progress.

Third. By the end of the 1950s the Soviet Union developed intercontinental missiles. An end was put to the U.S. monopoly on territorial invulnerability. How was this fact used by the Soviet Union? On 15 March 1958 the Soviet government proposed a ban on the utilization of outer space for military purposes, the elimination of foreign military bases on territories of other countries and the organization of international cooperation in the study of outer space and the launching of rockets in that space only in accordance with a coordinated international program. The United States refused. Clearly, it proceeded from the following: in no case should bases be abandoned as an instrument for exerting military-political pressure on the Soviet Union, while in the area of missiles one could also engage in some competition and rivalry. That was the way the United States chose. Consequently, one more historical

opportunity was lost and once again the United States relied on winning the arms race. However, could it be said that the result was a strengthening of U.S. national security?

Fourth. This does not end the story of lost opportunities, which proves the manner in which efforts to block the arms races were rejected. By the end of the 1960s the Pentagon began to arm strategic ballistic missiles with multiple independently-targetable reentry vehicles (MIRV), as a result of which the striking power of these missiles increased greatly. The argument that the Soviet Union had outstripped the United States in this area was absolutely worthless, for the USSR had no such weapons and had suggested that their development be restricted. The United States refused. Soon afterwards, the Soviet Union as well acquired intercontinental missiles with MIRV. It is thus that the aspiration of the American administration to retain an advantage in the arms race turned into an additional detriment to its national security.

It may sound paradoxical, but it is a fact that both in 1946, when the Soviet Union proposed the banning of nuclear weapons, in the 1970s as well the adoption of the Soviet proposals of limiting the deployment of MIRV was consistent with the interest of U.S. national security and the position adopted by the American administration clashed with this interest. What is the reason for this paradox? It is that in the nuclear age the true interests of national security of even the most powerful country neither coincide nor could coincide with any reliance on military superiority and with the interests of pursuing an imperial, a hegemonic policy.

Fifth. History, however, not only repeated itself but repeated itself under the new objective conditions and under different circumstances. During the first 25 or 30 years after the war, the possibility of halting the arms race was lost because of the U.S. aspiration to preserve military superiority. In the last decade the reason for the loss of this opportunity was somewhat different: Washington aspired to regain military superiority and to violate the existing military-strategic parity between the United States and the USSR and between NATO and the Warsaw Pact. Sometime in the mid 1970s new weapons--cruise missiles--were tested, and subsequently added to the U.S. nuclear-missile arsenal. Once again the Soviet suggestion of abandoning this type of weapon was rejected, and once again the Soviet Union here as well did not allow unilateral military superiority on the part of the United States: it acquired its own cruise missiles.

Plans for the deployment of new American missiles in Europe--Pershing-2--and cruise missiles were drafted in the second half of the 1970s. The Soviet Union suggested various alternatives for the prevention of this new round in the race--both radical and partial. All of them were rejected by Washington supported by its NATO allies. The deployment of new American missiles in Europe was undertaken. The Soviet Union responded with respective countermeasures both in terms of the territories of countries in which such missiles were deployed as well as the United States itself.

What was the overall result? Security in Europe diminished and the threat of a global nuclear conflict increased.

In the light of historical experience, let us go back to politics as the art of the possible as it applies to the present situation, taking into consideration both the lessons of the past and the problems the solution of which has become a categorical imperative, the most urgent demand of our time.

The choice which faces the international community of states and all mankind today is the following: either to continue sliding toward the precipice of a thermonuclear catastrophe or to halt, to turn back, to prevent the very possibility of such a catastrophe. Neither way is an abstraction. The alternatives can be practically reduced to very specific plans and the choice must be made between the most practical alternatives.

On the one hand, there is the program of "star wars," and the shifting the arms race to space. On the other, we have the program of "star peace," of reaching an agreement on banning offensive space weapons and cooperation among countries in the peaceful development of space.

On the one hand, we have the policy of continued stockpiling of nuclear arsenals ad infinitum, until the time when the development of assault space weapons would allegedly make nuclear weapons "unnecessary and obsolete." On the other, we have a program for the elimination of all types of mass destruction weapons, as presented in M.S. Gorbachev's 15 January 1986 declaration.

The readiness of the Soviet Union to follow the path of real disarmament is a substantial political reality. The sincerity of its intentions can be easily verified: suffice it to take it, as they say, "at its word," and show equal goodwill.

The problem which imperatively demands an answer is different: it is no longer a question of what percentage of mankind would survive a nuclear war but of could it survive at all under conditions of an increased arms race and nuclear armaments. Preventing the outbreak of a nuclear war and eliminating the very possibility of its outbreak and of the very danger of such a war are virtually identical at the present stage of global developments.

Historically, the critical significance of the time factor has already been quite properly manifested in the fact that its course, filled with lost opportunities for ending the accumulation of mass destruction weapons, has virtually reached the limit; it no longer offers any scope for the further escalation of political errors.

In the majority of cases, the individual and mankind as a whole practice the art of the possible through "trial and error." In at least one area this method has reached a limit beyond which it becomes absolutely unacceptable: solving the problem of preventing a thermonuclear catastrophe. The arms race objectively represents material preparations for such a catastrophe. Here as well the area of admissible "trials and errors" is becoming increasingly narrow. "Admissible" trials are those which do not exclude the possibility of errors which, albeit with difficulty, could be corrected. This area is increasingly approaching ground zero, beyond which the wrong "trial" would lead not to defeat but to self-destruction, a level beyond which it would be

impossible to return to a starting point or to keep looking for a political solution although under less favorable circumstances.

Generally speaking, in history, as in a game of chess, any move is final. Today the development of events has reached a level at which a single wrong move could mark the end of the entire "gain." In the crucial problems of war and peace history does not grant mankind the right to err, but only the right to learn from the errors of the past. However, this right itself becomes a mandatory obligation. The history of recent decades sternly cautions that this right--the possibility of interpreting the experience of the past--could vanish together with the disappearance of human civilization. It is a question not merely of repeating the history of the arms race. Its spiral is not merely a new round. It is a question of something more, of a loss of pace in curbing it which, in the nuclear age, threatens the loss of everything. Even the simple preservation of the current level of the potential for the self-destruction of mankind increases the likelihood that this potential may be used in time. This likelihood, which can be computed with almost mathematical accuracy, is greatly increased under conditions in which this potential is intensified and assumes ever new strike possibilities. The explosiveness of the situation worsens.

We would not be stretching a point by saying that international politics in the military area today can and must be exercised without the right to a mistake.

It must not be wrong and repeat the blunders of the past, when pursuit of military superiority fatally resulted in undermining international and national security.

It has no right to err by trusting instruments to do what man alone can accomplish, i.e., to use the existing possibility of halting the rush to war and to the nuclear precipice.

It has no right to err, for it could deprive mankind of a future.

The world is becoming increasingly aware of the fatal nature of the arms race. However, we must not ignore the fact that an undesirable instinct comes into play, that of becoming accustomed to living under the nuclear threat. To many the arms race has become something ordinary and commonplace, and even unnoticeable, imperceptible. It is accepted as a kind of train, rolling on the tracks in the distance or near by and which may or may not run over someone but which seems to be running in a parallel course with our daily life and cannot cross it. Yet the arms race is a train which is moving toward all of us, even if it can be neither seen nor heard.

History makes no difference between error and crime. Yet the situation becomes particularly alarming also by virtue of the fact that in some Western politicians an awareness of the seriousness of the existing situation has fallen substantially behind the size of the actual danger. A blind faith in the salutary nature of superweapons is retained whereas what is needed is a "superpolicy" which would take into consideration the new reality and would rise above current circumstantial governmental and national interests, for the

sake of the superior interest of preserving the peace, which today is the equivalent of preserving life.

The critical significance of the time factor on the military-technical level is determined, above all, by the nature of contemporary weapons. They make the partition separating an "armed world" from a most terrible war quite thin. The striking effect of nuclear weapons is greatly increased by the speed with which they can be delivered to their targets.

The expression "5 minutes to midnight" has become popular among journalists--the shortest time left until a nuclear catastrophe. Today this is no longer a metaphor but a technical reality: it would take no more than 30 minutes for an intercontinental ballistic missile to cross the distance between the USSR and the United States. American Pershing-2 missiles could reach Soviet territory in 8-9 minutes and Soviet operative-tactical missiles, deployed in answer to the American "Eurostrategic" weapon, which could strike at targets in Western Europe, would be even faster. Once launched, a missile cannot be turned back. Even an isolated use of such a system of weapons would provide no time to determine whether it was sanctioned or not. It could be used suddenly. It could motivate the attacked side to retaliate by hitting at all missile systems of the other side in order to reduce to a minimum the damage caused by an expected concentrated attack. The very nature of the weapons, therefore, makes mankind the hostage of an accident.

The military-technical aspect of the time factor could make almost imperceptible the line between the beginning of an armed conflict, the culmination of an armed conflict and a universal catastrophe. It eliminates the difference between front and rear. In other words, the features of the modern weapons and their scale are such that they have already crossed the critical line beyond which the war could assume the nature of a catastrophe, while increased military power makes peace increasingly fragile.

The concepts and doctrines of controlled scale, duration and intensiveness of nuclear war, developed by the Pentagon, are totally groundless. By its very nature a nuclear war is such that its duration and intensiveness cannot be controlled. Even the ending of wars in the past was not all that simple to plan. A nuclear war could develop quite rapidly. It may begin and end without the making of a political decision. A conflict situation can be settled under the conditions of universal peace. However, the settling of a nuclear conflict, after its outbreak, has a doubtful chance of success.

The time factor plays its negative role in another respect as well: the development of contemporary weapons takes a long time. As long as no agreement on halting their production exists, they are programmed for an entire historical period. In the case of some American programs, they extend to the next century. Therefore, material preparations for war becomes a kind of inertial movement which brings even greater danger to the future.

The current balance of nuclear potentials provides an equal danger to each side and it is only thus that it acts as a restraining factor. This, however, is a temporary situation. As the level of this potential increases the efficiency of the restraining factor drops. Such an increase intensifies the

equal threat to the sides but lowers security; it could reach a limit at which even parity will no longer be a factor of military-political restraint.

Furthermore, with each new round the arms race spiral becomes increasingly difficult to turn back; each round becomes more dangerous than the preceding one. The race moves into a qualitatively new phase: now it is measured not only in quantitative correlations but in terms of the technical perfection of systems of mass destruction weapons, encompassing all types of armaments, nuclear as well as conventional, and all types of military activities; it covers virtually the entire world. That is why blocking the arms race, halting it and unraveling its spiral in the opposite direction become extremely urgent.

On the political level, the critical significance of the time factor is manifested in the very substantial reduction of the space left for applying the "art of the possible" in terms of the quantitative and, particularly, the qualitative aspects of the arms race.

The intensification of armament production is clearly outstripping the mechanism of talks. The participants in the talks discuss means of identifying and estimating existing armaments with a view to their balanced and controlled reduction; meanwhile, the war industry is creating an output which could confuse all maps and introduce new changes in the existing balance of forces. Naturally, however, it is not a question of the fact that by its very nature the process of talks is doomed to fall behind that of armaments and superarmaments. Behind all this stands a policy which proceeds from the fact that the new weapon offers "trumps" to be used in the talks and allegedly stimulates them. In other words, this is a policy of converting the talks themselves into a screen behind which the arms race is continuing. Reliance on the arms race as a means of supporting diplomacy kills the objective of diplomacy, which is reaching an agreement on curbing this race. The arms race limits and shortens the available time left for solving the vitally important problems of disarmament and security.

The growing mass of weapons itself operates as a kind of material reality which creates increasing difficulties on the way to the so-called retreat, limiting the field and opportunities for political maneuvering for the sake of lowering the level of armaments and their elimination. Furthermore, weapons are appearing, the very existence, combat characteristics and potential use of which makes their control by national technical means increasingly harder. For example, cruise missiles can be concealed in a small van and their approach to the target cannot be detected on time easily and it is virtually impossible to determine whether they are carrying nuclear charges or not.

The arms race has already brought mankind to a critical point beyond which the problem arises of whether or not it will be able, taking into consideration the technical characteristics of the new types of earth of space weapons, to curb the madness of militarism. Should mankind cross that line, life on earth would be hanging on a thread which could break at any moment.

As far as an offensive space weapon is concerned, the creation of which is called for in the American "star wars" program, technically, it leaves the

"right" to make decisions not to man but to automatic systems. Even the slightest fault in any one link along the entire system poses the threat of global catastrophe. Therefore, the appearance of new systems of mass destruction weapons inevitably reduces both the time and possibility of making rational political decisions in critical situations.

The accelerating course of time itself increasingly demands that international politics, as the result of the foreign policy courses pursued by the individual countries, include the sensible principle of rejecting not only the concept of the possibility of winning a nuclear war but also the very idea of winning the arms race and, consequently, of pursuing the race itself. A nuclear war cannot be a rational means of achieving any kind of political objective. However, it can break out as the result of the policy of the arms race. The continuation of this race on earth, not to mention its spreading in space, can only accelerate the already critically high rate of accumulation and perfection of mass destruction weapons. The development of military ordnance itself is a factor which undermines the stability of international relations. Increasingly, ensuring security becomes a political problem which can be solved exclusively through political means.

A consideration of the critical importance of the time factor runs through the Soviet program formulated at the 27th CPSU Congress, which is a combination of the philosophy governing the establishment of a secure peace in the nuclear-space age with a platform for specific action. Its supreme objective is the preservation of life itself on earth, an objective which presents a problem which the present generation must solve. This thought was expressed, in particular, in the following statement by M.S. Gorbachev: "We cannot, we simply have no right to pass on the solution of this problem to future generations. We shall either solve it within a foreseeable historical time, at which point our children and grandchildren will be free from the heavy burden of living under the constant threat of a likely and almost instantaneous self-destruction by mankind. Or else, we would be unable to solve it now.... At which point, even if it is not the very worst that would occur, the solution of this problem would become unimaginably more difficult or even impossible."

A consideration of the critical significance of the time factor is one of the most important features of the Soviet concept of and practical program for disarmament. As was noted at the 27th CPSU Congress, "It is extremely necessary, before it is too late, to find a real solution which would securely block the transfer of the arms race to space." The Soviet initiatives aimed at the total elimination of nuclear and chemical weapons and the suggestions of the Warsaw Pact members concerning a wide-scale reduction of armed forces and conventional armaments in Europe are all strictly based on specific time periods and proceed from the urgency of taking steps to reduce the level of military confrontation.

Reducing the time needed for finding political agreements and the fastest possible undertaking of constructive actions was the basic line formulated at the 27th CPSU Congress. The CPSU proceeds from the fact that problems of international security cannot be solved by quick and even very intensive peaceful actions. Success can be achieved only as the result of systematic,

consistent and persistent efforts. Seeking, finding and using even the slightest opportunity of stopping the trend toward the growing threat of war, while this is still possible, was the answer of the 27th CPSU Congress to the challenge of the time. The congress emphasized the need for further intensifying Soviet foreign policy in all areas. Dynamism is an inner need of politics in the nuclear-space age.

Time works for us, time works for man, time works for progress and its advance brings us closer to a better future.... Such an optimistic belief of the past may turn into the most dangerous placidity in the face of the realities of the nuclear-space age. The arms race is a race to war, to the precipice. Allies can be gained in time only if this race is halted. This tolerates no delay. Let us recall the old saying that "delaying is like dieing." Today this means appealing to the feeling of responsibility of one and all to themselves and to future generations. Time not only does not wait but is pressing, urging us on. It does not tolerate any lagging in the interpretation of the broad and difficult problems of the age and the scope and depth of existing problems. The elimination of the nuclear threat will dispose of the "scarcity" of time which is so clearly felt by society, and will turn time into the human dimension of abundance and infinity.

Each step along the way of a planet supersaturated with mass destruction weapons makes increasingly clear the danger and senselessness of the arms race which is leading to nowhere. Political events have determined the futility of a policy "from a position of strength," which is increasingly manifesting its helplessness to solve any problem of regional or global nature. The very features of the nuclear-space age put a limit to the "right of might" in international politics. In answer to the challenge hurled by the manufacturers of death and their political representatives the potential for peace, reason and goodwill and the power of self-preservation of mankind is growing; the universal coalition of peoples, states and public trends is broadening. Their interaction in the interest of strengthening global security is a growing objective value which is superior to the forces of militarism and which works for the salvation of life. That is why it was stated from the rostrum of the 27th Party Congress that we cannot accept "no" as an answer to the question of will there or will not there be a mankind. We say that social progress and the life of civilization must and will continue.

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## BOOK REVIEWS AND BIBLIOGRAPHY

### PRODUCTION INTENSIFICATION: URGENT PROBLEMS AND SCIENTIFIC RESERVES

Moscow KOMMUNIST in Russian No 11 Jul 86 (signed to press 23 Jul 86) pp 124-128

[Review by L. Abalkin, USSR Academy of Sciences corresponding member, Academician A. Nikonorov, and Academician T. Khachaturov, of four books: 1. "Uskoreniye Nauchno-Tekhnicheskogo Progressa i Intensifikatsiya Vosprievodstva Osnovnykh Fondov" [Acceleration of Scientific and Technical Progress and Intensification of the Reproduction of Capital Assets]. In three volumes. Editorial collegium: S.M. Yampolskiy (editor in chief), V.P. Aleksandrova and N.S. Gerasimchuk. Naukova Dumka, Kiev, 1984. 2. "Ekonomicheskiye i Sotsialnyye Problemy Agropromyshlennogo Kompleksa" [Economic and Social Problems of the Agroindustrial Complex]. In three volumes. Editorial collegium: I.I. Lukinov (responsible editor), P.F. Vedenichev, A.M. Onishchenko, L.A. Shepotko. Naukova Dumka, Kiev, 1985-1986. 3. "Sovershenstvovaniya Mekhanizma Sotsialisticheskogo Khozyaystvovaniya" [Perfecting the Mechanism of Socialist Economic Management]. Vol 1, "Planned Foundations for Developing the Socialist Economic Management System;" vol 2, "Cost Accounting Stimulation of Efficient Economic Management." Naukova Dumka, Kiev, 1984. 4. O.M. Yun, "Intensifikatsiya Ekonomiki: Teoriya i Praktika Planirovaniya" [Economic Intensification: Theory and Practice of Planning]. Ekonomika, Moscow, 1986]

[Text] The course of socioeconomic acceleration developed by the party is aimed at the renovation of all aspects of life in Soviet society. In economics, acceleration above all presumes an increase in growth rates. Furthermore, its essence, as stated in the CPSU Central Committee political report to the 27th Party Congress, lies in a new quality of growth: in the comprehensive intensification of production on the basis of scientific and technical progress, the restructuring of the economy and efficient forms of management, organization and labor incentive.

After the congress, Soviet society went into action in all areas -- political, economic and spiritual. Social development, as noted at the June 1986 CPSU Central Committee Plenum, had taken on a powerful dynamic charge which led to a surge in the political consciousness of the masses. However, for the time being only the first steps on the path of reorganization have been taken. Many complex problems face us, the solution of which is impossible without a solid grounding in science. Therefore it is very important to objectively

evaluate its status, existing preparations and readiness for solving new questions, and at the same time identifying lagging areas and finding a way to strengthen ties with life and with practical socialist management.

Themes related to accelerating scientific and technical progress -- the basic lever for intensifying the national economy and the main direction of the party's economic strategy -- deserve particular attention. A three-volume work, prepared by a UkSSR Academy of Sciences Institute of Economics, is devoted to the problems of scientific and technical progress and the intensification of reproduction of basic resources.<sup>1</sup>

In the first volume the regularity of the creation and strengthening of the material and technical base of socialist production, means for increasing the efficiency of its use and the problems of managing the reproduction of its basic elements are examined. In this context, study of the experience and contradictory development trends in the latest areas of equipment and technology (such as microelectronics, robotics, flexible automated systems, computerization and biotechnology) in capitalist countries is of definite interest.

In the understanding itself of the material and technical base, the authors strive to avoid simplified, primarily technocratic concepts of its content and structure. They consider a system of machines which qualitatively transform the technological method of social labor productivity (see table 1, p 52) to be its basic element in the contemporary phase. They include labor objects in its structure as well and earnestly emphasize that the material and technical base is nothing greater than the simple sum of its component parts. For a number of internal connections among them are formed under the determining influence of the social nature of the society, in which such productive forces are functioning. Along with the technological connections, the structure of the material and technological base presumes a corresponding branched network of organizational and economic connections (*ibid.*, p 54).

Such an approach is fully substantiated and highly promising. However, having in fact followed a "tradition" which has arisen in economics, the authors focused their main attention on a study of technical and technological processes and dependencies and were unable to completely realize their ideas concerning the study of organizational-economic ties. Yet it is precisely this aspect of perfection to which essential, priority significance is ascribed today. The latest achievements of science and progressive equipment and technology can reach their potential effect and bring high results only if applied under conditions of a structured system of organizational-economic ties, based on a system of objective production relations and the economic laws of socialism. In this connection it is especially important to emphasize that the new draft of the CPSU program called for boosting the national economy to a fundamentally new, not only scientific and technical, but also organizational-economic level.

The authors pay great attention to the study of promising trends in scientific and technical progress, to the accelerated development of machine building and perfection of the reproduction cycle. Experience available in the national economy, including in the Ukraine, in the perfection of planning and economic

incentive for scientific and technical progress is summarized and analyzed. The authors' efforts towards the comprehensive examination of means for perfecting methods of planning the investment process, in which the interconnection of capital investments planning and scientific and technical progress is provided for, deserve full support.

The authors' approach to the evaluation of such a highly complex phenomenon as the dynamics of capital returns, which occupies one of the most important places in the program for all-round production intensification is essentially accurate and scientifically substantiated. They consistently and argumentatively point out the groundless attempts to lay a "theoretical base" under the justification of diminishing capital returns (see table 3, pp 15-16). The approach substantiated in the book, although it does not contain extensive recommendations on the entire set of problems on raising the efficiency of basic resource utilization, does provide, nevertheless, a reliable theoretical base for their development.

Under contemporary conditions, the question of evaluating the very progressiveness of new equipment is becoming all the more urgent. Today it is no longer sufficient to be oriented toward somewhat better indicators in comparison with existing ones. A bold glance ahead, an orientation to essentially new scientific and technical solutions, is needed.

Much is said in the reviewed books on the serious acceleration of scientific and technical progress and the need for qualitatively new breakthroughs. Yet the authors stop half-way and display a certain timidity. Here, evidently, the shortcomings of scientific research, mentioned with such urgency and principle-mindedness at the June 1986 CPSU Central Committee Plenum, are manifested. Economic science is called upon to more decisively pose the questions and make the necessary recommendations for qualitatively updating the country's production equipment.

In studying problems of capital investment efficiency, the authors only briefly touch upon the available methods for its determination. A deeper examination of the problems of planning capital investments on the basis of end socioeconomic effects is needed.

The authors have made a reasonably successful attempt to study the efficiency of capital investments in all stages of the "science-production" cycle, beginning with scientific developments, their economic substantiation, and design right up to inclusion in the construction plan the study of actual efficiency, which, as is well known, is often lower than planned and projected.

The program for the development of the agroindustrial complex is an organic component of the strategy pursued in accelerating the country's economic and social development. Noteworthy among books devoted to the economics of this area of the national economy is the collective monograph "Ekonomicheskiye i Sotsialnyye Problemy Agropromyshlennogo Kompleksa," edited by Academician I.I. Lukinov.

The contents of the first volume -- "Production Resources: Evaluation and Efficiency" -- is related to the overall problem of increasing the returns on resource potential. Its proper evaluation takes on prime significance under conditions of the reorganization of the economic mechanism of the agroindustrial complex which is being carried out, particularly during the transition to the standard planning method with consideration of the resource-availability of enterprises and regions. The research was carried out at a contemporary level and based on a detailed study of the use of individual agricultural production resources, as well as on the development of methodology and methods for calculating a uniform production potential indicator. Methods for monetary evaluation of land and manpower, based on the principle of resource interdependency, is of topical theoretical and practical interest. On this subject the monograph not only analyzes extensive data, but provides specific calculations as well.

The development of the theoretical foundations of the structural improvement of agroindustrial production and ensuring the equivalency of intersectorial exchange in APKs is considered an important scientific result in the second volume, "Organizational Structure and Economic Relations." In researching these key issues of APK development, the UkSSR Academy of Sciences Institute of Economics has obtained significant results.

As the main factors determining the further improvement of APK structure, the authors reasonably advance the formation, organization and outlining as the planning targets of product subcomplexes; the shifting of preferences in establishing the efficient dimensions for processing enterprises and their raw materials zones to agriculture; the determination of the territorial APK structure, proceeding from the maximally effective use of bioclimatic potential; and the optimization of the dimensions of agricultural and processing enterprises.

The most timely from a practical point of view is the research mentioned on the problems of equivalency in intersectorial exchanges, as well as the theoretical substantiation of a method for quantitative definition of price changes. The method suggested here allows us to identify the share of the general expenses of agricultural enterprises, which reflects the effect of a price factor on acquired means of production, expressed via an index. With this method we can determine the price imbalance and corresponding means of correcting the price system based on annual economic results.

The third volume, "Overcoming Major Disparities Between Town and Country," shows interesting results of a comprehensive study of social aspects in the development of APK production forces, socialist ownership relations, farm labor industrialization, improvements in consumption, increasing the real income of the rural population and developing the rural social infrastructure. Specific suggestions for improving the use of the human factor in APKs are well presented.

Methodological approaches to studying the rural production sphere -- defining its limits, composition and structure -- are of indubitable interest. Proposals for optimizing the correlation of resources aimed at production and social goals are substantiated in the book. The work convincingly points out

that the provision of nonagricultural types of activities in the village acquires all the more significance for resolving APK social problems. The study also outlines a set of measures for stabilizing the agrarian population, improving labor conditions in kolkhozes and sovkhozes, perfecting social services for rural residents and accelerating road, housing and cultural construction.

One should keep in mind that the monograph "Ekonomicheskiye i Sotsialnyye Problemy Agropromyshlennogo Kompleksa" is the result of many years of productive work by Ukrainian agroeconomists. It testifies to properly selected areas of study and to their important result. This fundamental scientific work, without a doubt, will be interesting and useful for a wide range of scientists and specialists working on implementing the Food Program.

One of the most important aspects in the strategy drafted by the party for accelerating the country's socioeconomic development is the creation of an integral, efficient and flexible management system allowing the full implementation of the possibilities of socialism. Today we cannot limit ourselves to partial improvements; radical reform is needed.

The execution of such reform presumes a careful study of accumulated experience in restructuring the economic mechanism, its pluses and minuses. It is also inconceivable without taking into account the background developed by economic science. It is possible to compose a definite concept of its presence and depth, based on the works "Sovershenstvovaniye Mekhanizma..." and "Intensifikatsiya Ekonomiki..."

A broad, comprehensive approach to the problem and an understanding of the complex, multilevel structure of the contemporary economic mechanism are, above all, characteristic for these works. The same approach is reflected in the theoretical interpretation and in the structure of the study, including the examination of questions on planning, cost accounting, price setting, finance-credit levers, management structure and participation of the masses in the preparation and making of management decisions. A detailed analysis in the two-volume edition of the legal aspects of the economic mechanism, and a close examination of the requirements, laws of their formation and their reflection in planning, as presented in O.M. Yun's book, are fully justified.

The study of accumulated experiences, lessons from the 1965 economic reform, subsequent measures on development of methods for economic management and the initial results of the large-scale economic experiment, occupies a large part of the books. The practice of development and implementation of a number of comprehensive target programs is summarized.

The economic mechanism plays a decisive role in the economic implementation of socialist ownership, in the possession of our system's possibilities and advantages. It is as, for example, the authors of the two-volume edition write, the most important component of the economic system of socialism; it expresses the production relations prevailing in socialist society and serves as a method which ensures the functioning of social production. Production relations, which form the content of the economic mechanism, in comparison with ownership relations, are more flexible and better reflect the diversity

of specific circumstances, and more rapidly react to shifts in production processes and in the system of societal (production and individual) requirements (see book 1, pp 8-9).

In O.M. Yun's work a no less important circumstance is emphasized, namely that the socioeconomic policy of the party and government is implemented through the economic mechanism. The economic mechanism itself incorporates elements of production forces, production relations and superstructure and is the link is the social system which unifies them, through which the harmony among them can be ensured (see p 16). However, the author makes the connection of the economic mechanism with the management and planning system not entirely clear. Planning acts here as a link in the economic mechanism, that is, as a "metasystem" in relation to it (see p 19).

The perfecting of the economic mechanism under contemporary conditions is related to the strengthening of its influence on economic intensification, raising production efficiency and achieving high final results. This influence can be strengthened in two ways: by accelerating scientific and technical progress and perfecting management, production and labor organization (see vol 1, p 113).

The central place in the reviewed works is allotted to perfecting planning as the main link in the economic mechanism of socialist society and the most important instrument for carrying out the party's economic policy. The principles of planning, the system of economic and social development plans and experience in drafting and implementing comprehensive target programs are studied in detail. The study of means for coordinating sectorial, resource, territorial and program sections of plans, presented in O.M. Yun's book (see pp 44-49 and others), deserves a positive evaluation.

Special attention in the comprehensive work on restructuring the economic mechanism, presently under way, is given to the development of initiative and independence of production enterprises and associations with the simultaneous increase of their responsibility for the quality and final results of economic activity. This is related to their conversion to full accounting, to the development of self-recovery and self-financing, and to the wide use of commodity-monetary relations.

The solution to practical questions greatly depends on the proper understanding of the nature and place of the national economy's primary link, of cost accounting functions and of the new content of commodity-monetary relations in socialist society. Analysis of the dialectics of the socialist economy shows that within the framework of integrity and national economic unity, its primary links have a relative economic autonomy. This is not simply a legal aspect but an objective property of production relations.

As the authors of the two-volume work correctly note, the specifics of socialist production relations lie in the fact that each enterprise appears as a relatively independent economic entity. Means of production are economically isolated and consolidated by separate enterprises working on the basis of cost accounting (see vol 2, p 178). Precisely by virtue of this circumstance, enterprises act as socialist commodity producers; the basic

principles of cost accounting, essentially, are the principles of activity of socialist commodity producers; the features of enterprise cost accounting are at the same time the essence of the features of a commodity producer (*ibid.*, p 19). O.M. Yun also acknowledges a relative economic autonomy as well, relating it to the fact that labor under socialism bears a limited directly social nature (see p 130).

Not all the assessments of the authors of the reviewed two-volume work are accurate. They consider the cost accounting of cooperative and kolkhoz enterprises, unlike that of state enterprises, to include elements of commercialism on a socialist base. They are perceiving the latter in the fact that cooperative and kolkhoz enterprises can sell part of their production at market and contract prices and can distribute net income according to their own plan (see vol 2, p 22). However, after all, today all this also goes into the operating practice of state enterprises. It is hardly possible to consider the points mentioned as attributes of cooperative enterprises. In reality both direct sales by enterprises on the market, the use of contractual prices and the independent use by labor collectives of funds which remain at their disposal from the legal distribution of income, are features of developed, full cost accounting. In precisely this form, the possibilities for ownership by the whole people are most fully revealed and carried out.

Further perfection of the economic mechanism suggests wide and active use of commodity-monetary relations and corresponding categories: prices and profits, finances and credit. Along each of these lines, many interesting and fertile ideas may be found in the reviewed books. However, still more work lies ahead for economic science in this area, in order to fully realize the conclusions made by the party on the new content of commodity-monetary relations and their inadmissible underestimation in the practice of planned economic management.

Expanding the independence of enterprises and associations and developing the initiatives of labor collectives are inseparable from strengthening their responsibility. It is not a question of a simple mechanical combinations of one with the other. Between them lies a complex, regular cause-effect connection. Both the experience and theory of management persuasively indicate that there is no more reliable means to foster responsibility than greater independence.

Economic responsibility is an important category of socialist political economy which has been gravely understudied. Therefore it is necessary to support most strongly the striving of the authors of the two-volume edition to describe its content through the example of responsibility for observance of contractual obligations. Although it must be emphasized that the content of economic responsibility is significantly broader, it is directly related to the full development of cost accounting.

One of the key aspects in the system of steps to perfect the economic mechanism, one of is the development of the social activeness of the masses and their wide involvement in production management. In the reviewed books much attention is given to various aspects of this trend towards increasing

the efficiency of the management system. The authors' interpretation of the means by which socialist society opposes various manifestations of subjectivism and bureaucratism deserves support. Particularly important among them are social and administrative-economic control over the labor of each working person, who has the right to make economic decisions; democratic forms of economic management and the involvement of broad toiling masses in production management, combined with one-man command; granting of certain independence to each economic unit, encouraging its initiative and cost accounting, developed along with centralized planned management (see book 1, pp 133-134).

The numerous conclusions and recommendations contained in the books proceed from the need for improvement and modernization of various aspects of the existing economic mechanism. Their authors have hesitated to pose the question of its radical reorganization. This, naturally, leaves its mark on the nature and scale of the suggested changes.

Are there grounds for similar reproofs? Yes, there are. The need for profound reorganization of the economic mechanism takes shape objectively and reflects the qualitatively changed conditions of economic growth, the greatly increased scales of production and the complication of economic ties. It is also dictated by a pressing requirement for converting the national economy to intensive development, replacing the previous form and methods of economic management. Science must be the first to notice imminent changes and to define the direction of reorganization.

The study of the extent and thoroughness with which the problems in this selection of books have been treated, which make an important contribution to the development of economic thought, leads to yet another conclusion, which is that the successful solution of urgent problems requires further substantial strengthening of the theoretical foundations of the economic sciences, socialist political economy. It is here that today many unsolved problems have accumulated and, perhaps, it is precisely here that the familiar remoteness of the economic front from the problems of life, mentioned at the 27th CPSU Congress, is most graphically coming to light. Therefore, the reorganization of political-economic research has important significance for the entire system of economic sciences.

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